



# COMPUTERWORLD

MAY 18, 2005 VOL. 32 NO. 20 \$5.00

# Leaders & Laggards

SPECIAL  
REPORT

**Surprise:** Health care is one of the most aggressive industries in adopting wireless technologies, while the financial services industry has been slow to adopt. Profiles of five vertical markets begin on page 30.

**ONLINE**

Log onto our new Power Primer webcast to hear how different industries are going wireless and transforming how they do business. [QuickLink #5830](#)

## Global Needs Propel Product Life-Cycle Management Efforts

## Users seek better data management capabilities

BY JAYKUMAR VIJAYAN  
NASHVILLE, TENN.

Product life-cycle management technologies that were

once mainly used in engineering environments are increasingly being applied by manufacturers to support collabora-

tive development and management of product portfolios, technical specifications and production materials.

Driving the trend is the need for better product data management capabilities as manufacturers globalize their operations and look for new ways to cut operating costs, IT managers and analysts said at a conference here last week.

For example, Johnson & Johnson last week launched *PLM*, page 16.

BY THOMAS HOFFMAN

As publicly traded companies are forced to document their internal controls to comply with the Sarbanes-Oxley Act, some are seeing a trickle-down effect: longer and more costly IT projects.

That's because project teams now have to conduct more thorough quality-assurance assessments and testing throughout project life cycles to document IT

controls, according to IT managers and analysts who were interviewed last week.

"I've spent the past four or five years trying to streamline our project methodologies, but SOX has added that all back."

said the vice president of IT at a telecommunications company. The executive, who requested anonymity, cited the need for additional sign-offs during different phases of projects along with other required controls-related checklists.

As a result, "business sponsors are complaining because it's adding a considerable amount of time to projects," she noted.

After helping finance departments meet the initial set of Sarbanes-Oxley requirements, IT staffs are entering a second stage of compliance work, said Cathy Hotka, principal at Cathy Hotka &

Sarb-Dx, page 57

## Office to Become Front-End Option for More App Users

## Enterprise vendors, Microsoft agree to integrate software

**BY CAROL SLIWA**  
Microsoft Corp. has been trying for years to get other software vendors to use its Office suite as the front end

for their applications. Now it appears to be making headway.

Supply chain management vendor i2 Technologies Inc. and content management provider Interwoven Inc. last week unveiled integration pacts with

Office, page 57

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U M I

## PERIODICALS

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## MOBILE & WIRELESS

### Leaders & Laggards

**EDITOR'S NOTE:** Wireless adoption varies a lot by vertical industry, so we've examined the trends in five sectors: health care, government, financial services, utilities and manufacturing. The leaders and laggards might surprise you. **PACKAGE BEGINS ON PAGE 39.**

**40 Health Care.** The marriage of clinicians armed with mobile devices and hospitals moving to deploy WLANs is resulting in the growth of health-care-specific wireless applications.

**44 Government.** The public sector leads in wireless and mobile deployments, as agencies work to reduce paper, speed up deliveries and make defense officials more mobile.

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**53 Opinion:** The PC found its way into corporate IT by satisfying horizontal market needs. Wireless handhelds will succeed because they solve vertical industry problems, says columnist Mark Hall.









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## KNOWLEDGE CENTER

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### Wi-Fi Quiz

- 1. Which Wi-Fi standard is the most common?
- 2. Which Wi-Fi standard is the most secure?
- 3. Which Wi-Fi standard is the most expensive?
- 4. Which Wi-Fi standard is the most widely used?

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### Executive Briefing

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### Wireless Glossary

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## AT DEADLINE

### Microsoft, Sun Agree On Sign-on Specs

BY THOMAS HODGSON  
Microsoft Corp. and Sun Microsystems Inc. last week agreed on a single sign-on specification to ease cross-platform identity management and also promised to broadly improve the interoperability of their rival Hot and Java Web services platforms.

The announcement, made in Palo Alto, Calif., by Microsoft CEO Steve Ballmer and Sun CEO Scott McNealy, comes a year after the two companies agreed to settle a lengthy antitrust legal battle. That relates to a \$2 billion payment by Microsoft to Sun and a 10-year agreement to improve interoperability between the companies' systems.

"We've integrated the security environment," said Ballmer, "enabling you to seamlessly form an integrated view of users, security and the between the Sun world and the Microsoft world. That's a very important place of work that we have done in the first 12 months."

The companies jointly developed single sign-on specifications for both Hot and Sun's Java Enterprise System environment that work within a company's firewall and with suppliers and partners.

Microsoft and Sun also said they're developing software for managing the systems of both companies from a single console.

"We have Solaris and Windows playing nice - in unique and quite unexpected ways across the board," said McNealy.

The two companies also formed an IT advisory board that includes Fred Kilgus, director of systems development and chief technology officer at General Motors Corp.'s Information Systems and Services organization.

GSI, which has 1 million users across the globe, is a heavy user of Solaris and Windows systems, Kilgus said. The customer is now working on a proof of concept to develop an integrated environment.

The single sign-on draft specifications will be submitted to an expert-reviewed standards body and will likely be included in next year's product releases. © 5447

# Nasdaq CIO Confirms Move To Open-source Instinet Apps

BY LUCAS MEARIAN

NASDAQ Stock Market Inc.'s CIO said last week that the exchange will scrap its proprietary SuperMontage order entry and execution system in favor of an open-source system from electronic broker Instinet Group Inc., which Nasdaq agreed to acquire last month.

The move to switch systems is a key part of Nasdaq's effort to integrate its technology with that of Instinet and Brut LLC, which it bought from SunGuard Data Systems Inc. for \$190 million last fall.

Nasdaq CIO Steve Randich said that SuperMontage, which went online two years ago after a three-year, \$107 million development effort, is built on Hewlett-Packard Co. NonStop servers and software. Nasdaq has been trying to move away from that proprietary platform in favor of an open-source system with better price/performance, Randich said.

"With the [Instinet] acquisition, we can do it faster in terms of a schedule," he added.

Tom Jordan, CEO of Jordan & Jordan Inc., a New York-based technology consulting

firm that specializes in the financial services industry, said Nasdaq is well positioned to integrate the Instinet technology from Instinet because of its recent experience merging its systems with Brut's.

Randich said Nasdaq has completed two of the three planned phases for integrating Brut and its order execution system. The logical layers have been integrated, he said, but the task of physically combining systems into Nasdaq's Connecticut data center remains. By the second half of 2006, Randich plans to have taken the trading platforms of Brut and Instinet, both now located in New Jersey, and installed them in Connecticut.

Jordan noted that "anytime you're merging two electronic trading systems, there's some degree of challenge associated with that. I was struck that Nasdaq said it would adopt Instinet's trading platform, whereas [the New York Stock Exchange] said it would continue its hybrid model after acquiring Archipelago."

The NYSE announced the proposed acquisition of electronic communications network Archipelago Holdings



Inc. earlier this month.

Randich said his greatest challenge while juggling the technological integration of the three platforms is to convince Brut and Instinet customers that their lives won't change as a result of the acquisitions.

### Juggling Protocols

Randich said he plans to keep continuity in the customer-facing order systems by using a single version of the Financial Information Exchange (FIX) protocol, a messaging standard developed specifically for the real-time electronic exchange of securities

transactions. All three exchanges will "connect into the target platform, which is Instinet," he said.

Currently, only 20% of Nasdaq's orders come in over the FIX protocol. The remainder go over the proprietary CTCL or computer-to-computer interface. Instinet uses its home-grown OUCH messaging format. Brut used its proprietary ECN Order API and FIX.

Randich said the new Instinet platform will support more than 100 million transactions per day, with peaks of over 20,000 per second.

He said IT layoffs will result from the mergers but would not say how many. He expects \$100 million in savings each year over the next three years by combining the operations. In advance of the Instinet deal, Randich implemented a policy to notify all employees who will be affected by layoffs three months in advance.

"It's somewhat of a controversial concept to launch it, but I figured it would have more upside than downside. And that's proven to be the case," he said. "Our voluntary attrition remains at historical lows." © 54399

## Nasdaq's Randich Discusses Financial Industry Mergers

stitutions face increased competition from the NYSE with its proposed purchase of Archipelago Holdings, which trades 25% of Nasdaq's volume today. But according to CIO Steve Randich, unlike Nasdaq's recent move to buy Instinet Group and its earlier purchase of Brut, the NYSE and Archipelago merger involves four synergies. In an interview with Computerworld's Lucas Mearian, Randich discussed the challenges facing him and his firm.



Q&A

What hurdles do you see facing the merger of the NYSE and Archipelago? I think there's political and cultural hurdles. To me, there's no discernible synergy. In that NYSE is going to continue with their hybrid market and electronic trading model. And it's not clear to me how they're going to be leveraging Archipelago technology.

Does the NYSE merger with Archipelago change your plans for merging Instinet and Instinet technology?

It validates our decision with the Instinet acquisition, which was planned well in advance and executed with a lot of insight and thought about how we'd take advantage of the platform, how it would affect our cost structure and how it would affect our overall competitiveness in the trading space.

Why did you decide to replace the Nasdaq order entry platform with Instinet's? It's got some very unique and innovative designs that allow it to be web-brokerage efficient. I don't have enough detail taught into these

because the deal isn't closed. But from the observations I've made and my best best, we feel there's an efficiency there that is huge.

What data integration issues do you have with the Instinet acquisition? The real challenge is you have hundreds of customers that are connected to these platforms across Wall Street and across North America. You want to make the migration as transparent as you can to the customer base. The way we achieve that - and we're going through this very precise process for the final integration - is you try not to make any changes to



## Sprint, Microsoft Team on Wireless Location Service

Offer positioning technology, mapping software for tracking mobile users

BY MATT HAMBLEIN

Sprint Corp., with support from Microsoft Corp., today will announce a nationwide service designed to help businesses locate, track and direct mobile workers via wireless text and voice messages.

Analysts said the Sprint Business Mobility Framework is the first network-based location service for corporate users from a national wireless carrier in the U.S., although Bell Canada and several carriers in Europe and Asia already have similar offerings.

Microsoft will contribute its MapPoint Location Server software, which presents information about the location of handheld devices on a computer-based road map for use by dispatchers or call center workers. However, the software and Sprint's location service will be sold separately.

Barry Tishgart, senior director of wireless product management at Sprint, said the carrier hopes the service will entice businesses that need to communicate with mobile white-collar workers, such as sales personnel and business executives. That would be in

addition to the blue-collar workers who typically use location-based services, including truck drivers and delivery and repair crews.

But early adopters identified by Sprint fall into the latter category. For example, 1-800-Got-Junk this summer plans to test the new service on about 100 of the trucks that it uses to make pickups, said Roman Azbel, vice president of IT at the Vancouver, British Columbia-based company, which has 150 franchises in Canada and the U.S.

1-800-Got-Junk already uses the location service offered by Bell Canada's Mobile Unit along with Microsoft's Map-



1-800-Got-Junk will test the Sprint service over 90 days for accuracy.

Point server. Azbel said the 90-day test of Sprint's service will help determine the accuracy and performance of the vendor's location technology.

If it takes even a few minutes for a dispatcher to receive location information from a truck, the driver "can drive pretty far" beyond the pinpointed spot, Azbel noted.

### Early Returns

In February, Schnuck Markets Inc. in St. Louis announced that it was an early user of Sprint's location service for communicating with 100 trucks making deliveries to stores in six states. Bob Drury, senior vice president of logistics, manufacturing and IT at Schnuck, said last week that the wireless service is tied to Web-based tracking and mapping software developed by two small vendors.

Drury said the service costs Schnuck about \$30 monthly per device and is providing an

"excellent return" because it has enabled a 15% reduction in the time needed to unload goods at stores.

Store managers can be notified long before a truck arrives, he said. In addition, a dispatcher can locate a truck to notify the driver of traffic problems or send the vehicle back to a store if there were problems with a delivery.

Sprint can locate a device to within 5 to 300 meters of its actual position by using Global Positioning System satellites and triangulation calculations based on information from its cellular towers. Tishgart said. The service will cost less than \$300 per month for up to 5,000 location transactions, plus an undisclosed start-up fee.

MapPoint Location Server starts at \$8,000, according to Microsoft. **EW 54381**

## Sun to Buy Struggling Thin-Client Vendor

Plans to integrate Tarantella with Solaris, Sun Ray

BY PATRICK THORNDIAU

Tarantella Inc. is losing money and customers, but its thin-client technology found a potential savior last week in Sun Microsystems Inc., which is acquiring the Santa Cruz, Calif.-based company for \$25 million in cash.

Compared with its chief rival, Citrix Systems Inc., Tarantella is on the ropes. For its 2004 fiscal year, which ended in September, Tarantella reported \$12.5 million in revenue and a net loss of \$15.7 million. In contrast, Citrix had revenue of \$74 million during the last calendar year. The glaring differences in performance continued during the most recent quarter (see box).

In addition, some of the reference customers listed on Tarantella's Web site are no longer using its Secure Global Desktop software. Two users reached last week said they had moved off the system, and

a third is beginning to evaluate Microsoft Corp.'s terminal server software as a potential replacement.

One customer, John Pelling, head of IT services at Somerset Stores Ltd. in Bristol, England, uses Tarantella's technology to deliver database applications running on IBM AIX-based systems to end users at the retailer's head-quarters and 1,400 stores.

Pelling said he has generally been happy with Tarantella's software, but he had become worried about the company's future. Sun's pending acquisition of Tarantella "has to bring financial stability, which it has not really enjoyed," Pelling said. He was uncertain about what the deal would mean for the technology, though. "It all depends on what Sun's intentions are, and that's not declared yet," he said.

Sun expects to complete the deal during the third quarter. John Locacono, Sun's executive vice president for software, said during a teleconference that the company plans to integrate the Tarantella technol-

ogy as quickly as possible with Solaris and its own Sun Ray thin-client system.

Sun will also likely have to address problems reported by some former Tarantella users. Jay Huber, an IT manager at Fort Communications Inc., a Chicago-based phone services provider, adopted Secure Global Desktop a year ago this month and provided a customer testimonial that Tarantella posted on its Web site.

### Positive Features

Tarantella's strength, according to analysts, is its ability to deliver mainframe and Unix applications to thin clients. Citrix also supports some Unix variants with its software, but it is largely seen as being focused on Windows-based applications.

Gary Hein, an analyst at Burton Group in Midvale, Utah, said he thinks Sun is more interested in Tarantella's management, provisioning and reporting capabilities than in its

actual thin-client technology. Adding those features "will round out what they're doing with their Sun Ray line," he said.

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Jay Huber, an IT manager at Fort Communications Inc., a Chicago-based phone services provider, adopted Secure Global Desktop a year ago this month and provided a customer testimonial that Tarantella posted on its Web site.

Huber's testimonial was still on the site last week. But "to tell you the truth, I actually quit using their system about three or four months ago," he said. "I had a lot of trouble running it on the server, and their support was pretty bad." Huber switched his Tarantella users to Citrix's software.

Another user case study on the Web site involves the Robert H. Smith School of Business at the University of Maryland. But the College Park-based business school has stopped using Tarantella's software because of Windows and Java interoperability problems, said Ernie Softwood, its enterprise architect. It also is now a Citrix user. **EW 54384**

the front-end interface.

How does all this consolidation affect the capital markets, and how will technology play into IT? At one end, there's reduced fragmentation across the industry in terms of market venues, but not so much that there's no competition. There's still a relative ease of entry in the industry for new, efficient competitors with innovative technologies to come in and lower existing venues' costs. At the same time, it's allowing the industry to achieve economies of scale that ultimately pass the savings that result from that scale on to investors.

SECURITY ANALYSIS			
Revenue	\$2.7M	\$5.2M	\$5M
Loss	\$2.5M	\$3M	\$3M



## AT DEADLINE

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GM, which has 1 million users across the globe, is a heavy user of Solaris and Windows systems, Killeen said. The automaker is now working on a proof of concept to develop an integrated environment.

The single sign-on draft specifications will be submitted to an as-yet-unidentified standards body and will likely be included in next year's product releases. © 54417

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Timeline	
1	Nasdaq acquires Brut in September '04
2	Nasdaq agrees to acquire Instinet Group in April '05
3	Brut trading platform will be fully integrated by December '05
4	Nasdaq and Brut trading platforms will be fully integrated with Instinet's in the second half of 2006

Inc. earlier this month.

Randich said his greatest challenge while juggling the technological integration of the three platforms is to convince Brut and Instinet customers that their lives won't change as a result of the acquisitions.

## Juggling Protocols

Randich said he plans to keep continuity in the customer-facing order systems by using a single version of the Financial Information Exchange (FIX) protocol, a messaging standard developed specifically for the real-time electronic exchange of securities

transactions. All three exchanges will "connect into the target platform, which is Instinet," he said.

Currently, only 20% of Nasdaq's orders come in over the FIX protocol. The remainder go over the proprietary CTEL, or computer-to-computer interface. Instinet uses its home-grown OUCH messaging format. Brut used its proprietary ECN Order API and FIX.

Randich said the new Instinet platform will support more than 100 million transactions per day, with peaks of over 20,000 per second.

He said IT layoffs will result from the mergers but would not say how many. He expects \$100 million in savings each year over the next three years by combining the operations. In advance of the Instinet deal, Randich implemented a policy to notify all employees who will be affected by layoffs three months in advance.

"It's somewhat of a controversial concept to launch it, but I figured it would have more upside than downside. And that's proven to be the case," he said. "Our voluntary attrition remains at historical lows." © 54399

## Nasdaq's Randich Discusses Financial Industry Mergers

Nasdaq faces increased competition from the NYSE with its proposed purchase of Archipelago Holdings, which trades 25% of Nasdaq's volume today. But according to CIO Steve Randich, unlike Nasdaq's recent move to buy Instinet

What hurdles do you see facing the merger of the NYSE and Archipelago? I think there's political and cultural hurdles. To me, there's no discernable synergy, in that NYSE is going to continue with their hybrid market and electronic trading model.

And it's not clear to me how they're going to be leveraging Archipelago technology.

Does the NYSE merger with Archipelago change your plans for merging Nasdaq and Instinet technologies?

It validates our decision with the Instinet acquisition, which was planned well in advance and executed with a lot of insight and thought about how we'd take advantage of the platform, how it would affect our cost structure and how it would affect our overall competitiveness in the trading space.

Why did you decide to replace the Nasdaq order entry platform with Instinet's? It's got some very unique and innovative designs that allow it to be mind-bogglingly efficient. I don't have direct evidence right into those

because the deal isn't closed. But from the observations I've made and my team has made, we feel there's an efficiency there that is huge.

What data migration issues do you face with the Instinet acquisition? The real challenge is you have hundreds of customers that are connected to these platforms across Wall Street and across North America. You want to make the migration as transparent as you can to the customer base. The way we achieve that - and we're going through this very same process for the Brut integration - is you try not to make any changes to





## Sprint, Microsoft Team on Wireless Location Service

Software positioning technology; mapping software for tracking mobile users

BY MATT HAMBLIN

Sprint Corp. is in support from Microsoft Corp., today will announce a nationwide service designed to help businesses locate, track and direct mobile workers via wireless text and voice messages.

Analysts said the Sprint Business Mobility Framework is the first network-based location service for corporate users from a national wireless carrier in the U.S., although Bell Canada and several carriers in Europe and Asia already have similar offerings.

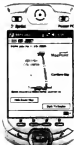
Microsoft will contribute its MapPoint Location Server software, which presents information about the location of handheld devices on a computer-based road map for use by dispatchers or call center workers. However, the software and Sprint's location service will be sold separately.

Barry Tishgart, senior director of wireless product management at Sprint, said the carrier hopes the service will entice businesses that need to communicate with mobile white-collar workers, such as sales personnel and business executives. That would be an

addition to the blue-collar workers who typically use location-based services, including truck drivers and delivery and repair crews.

But early adopters identified by Sprint fall into the latter category. For example, 1-800-Got-Junk this summer plans to test the new service on about 100 of the trucks that it uses to make pickups, said Roman Azbel, vice president of IT at the Vancouver, British Columbia-based company, which has 150 franchises in Canada and the U.S.

1-800-Got-Junk already uses the location service offered by Bell Canada's Bell Mobility unit along with Microsoft's Map-



1-800-Got-Junk will test the Sprint service over 90 days for accuracy.

Point server. Azbel said the 90-day test of Sprint's service will help determine the accuracy and performance of the vendor's location technology

It takes even a few minutes for a dispatcher to receive location information from a truck, the driver "can drive pretty far" beyond the pinpointed spot, Azbel noted.

### Early Returns

In February, Schnuck Markets Inc. in St. Louis announced that it was an early user of Sprint's location service for commuters, along with 100 trucks making deliveries to stores in six states. Bob Drury, senior vice president of logistics, manufacturing and IT at Schnuck, said last week that the wireless service is tied to Web-based tracking and mapping software developed by two small vendors.

Drury said the service costs Schnuck about \$30 monthly per device and is providing an

85% client return. By use it has enabled a 15% reduction in the time needed to unload goods at stores.

Store managers can be notified just before a truck arrives. By said its location a dispatcher can locate a truck to notify the driver of traffic problems and send the vehicle back to a store if there were problems with a delivery.

Sprint can locate a device as well as to 100 meters of its actual position by using cellular Positioning System satellite lines and triangulation calculations based on information from its cellular towers. Tishgart said. The service will cost less than \$100 per month for up to 5,000 location transactions, plus an undisclosed start-up fee.

MapPoint Location Server starts at \$8,000, according to Microsoft. **Q 54351**

## Sun to Buy Struggling Thin-Client Vendor

Plans to integrate Tarantella with Solaris, Sun Ray

BY PATRICK THORNDAL

Tarantella Inc. is losing money and customers, but its thin-client technology found a potential savior last week in Sun Microsystems Inc., which is acquiring the Santa Cruz, Calif.-based company for \$25 million in cash.

Compared to its chief rival, Citrix Systems Inc., Tarantella is on the ropes. For its 2004 fiscal year, which ended in September, Tarantella reported \$12.5 million in revenue and a net loss of \$15.7 million. In contrast, Citrix had revenue of \$74 million during the last calendar year. The glaring differences in performance continued during the most recent quarter (see box).

In addition, some of the reference customers listed on Tarantella's Web site are no longer using its Secure Global Desktop software. Two users reached last week said they had moved off the system, and

a third is beginning to evaluate Microsoft Corp.'s terminal server software as a potential replacement.

One customer, John Pelling, head of IT services at Somerset Stores Ltd. in Bristol, England, uses Tarantella's technology to deliver database applications running on IBM AIX-based systems to end users at the retailer's headquarters and 1,400 stores.

Pelling said he has generally been happy with Tarantella's software. But he had become worried about the company's future. Sun's pending acquisition of Tarantella "has to bring financial stability, which it has not really enjoyed," Pelling said. He was uncertain about what the deal would mean for the technology, though. "It all depends on what Sun's intentions are, and that's not declared yet," he said.

Sun expects to complete the deal during the third quarter. John Lioacato, Sun's executive vice president for software, said during a teleconference that the company plans to integrate the Tarantella technol-

ogy as quickly as possible with Solaris and its own Sun terminal server system.

Sun will support Tarantella's existing products "as is," Lioacato added. "As far as existing customers, we will support those customers as they continue have state."

### Positive Features

Tarantella's strength, according to analysts, is its ability to deliver mainframe and Unix applications to thin clients. Citrix also supports some Unix variants with its software, but it is largely seen as being focused on Windows-based applications.

Gary Hein, an analyst at Barton Group in Midvale, Utah, said he thinks Sun is more interested in Tarantella's management, provisioning and reporting capabilities than in its

actual thin-client technology. Adding new features, "we'll round out what they're doing with their Sun Ray line," he said.

Sun will also likely have to address problems reported by some former Tarantella users. Jay Huber, an IT manager at Fort Communications Inc., a Chicago-based phone services provider, adopted Secure Global Desktop a year ago this month and provided a customer testimonial that Tarantella posted on its Web site.

Huber's testimonial was still on the site last week. But to tell you the truth, I actually quit using their system about three or four months ago," he said. "I had a lot of trouble running it on the server, and their support was pretty bad." Huber switched his Tarantella users to Citrix's software.

Another user case study on the Web site involves the Robert H. Smith School of Business at the University of Maryland. But the College Park-based business school has stopped using Tarantella's software because of Windows and Java interoperability problems, said Eric Sufimoff, its enterprise architect. It also is now a Citrix user. **Q 54394**

the front-end interface.

How does all this consolidation affect the capital markets, and how will technology play into it? At one end, there's reduced fragmentation across the industry in terms of market venues, but not so much that there's no competition. There's still a relative ease of entry in the industry for new, efficient competitors with innovative technologies to come in and keep existing venues honest. At the same time, it's slowing the industry to achieve economies of scale that ultimately pays the savings that result from that scale on to investors.

NUMBER CRUNCH		
For the quarter that ended March 31:		
	REVENUE	PROF.
Tarantella	\$2.7M	(\$3.9M)
Citrix	\$202M	\$33M



## BRIEFS

## Compuware to Buy Adlex for \$36M

Compuware Corp. has agreed to acquire privately held Adlex Inc. for about \$36 million in cash. About 80 Adlex employees will join Compuware at the close of the deal, which is expected within a month. Adlex's technology is designed to enable enterprise users to manage the quality of service of business-critical applications.

## Cisco Q3 Revenue Rises by 10%

Cisco Systems Inc. cited gains in its service-provided business as it reported a year-over-year revenue increase of more than 10% in its fiscal third quarter.

CISCO Q3 REVENUE BY SEGMENT			
Segment	Q3 '05	Q3 '04	% Change
Products	\$6.2B	\$5.8B	+7%
Services	\$1.4B	\$1.2B	+17%

## Duffield Lays Out Venture Plans

Dave Duffield, founder of PeopleSoft Inc., Integral Systems Inc. and Information Associates, has created a Web site, [www.davesnewsmove.com](http://www.davesnewsmove.com), to publicize his next venture. The site lists the as-yet-unannounced company's management team and says the group is "building the next generation of enterprise applications" that will "serve the extended enterprise."

## Novell Acquires Linux Security Firm

Linux vendor Novell Inc. has acquired Immunity Inc., a security software vendor in Portland, Ore. Terms of the deal weren't disclosed. Founded in 1998, Immunity was funded in part by the Defense Advanced Research Projects Agency. The company's AppArmor software is used to secure Linux applications. Immunity also developed much of the Linux Security Modules software used in the Linux 2.6 kernel.

## ON THE MARK



## Compliance Budgets Attract Packs of . . .

... vendors eager to unburden you of all those dollars, while claiming to put you right with the slew of regulations weighing heavily on IT. AMR Research Inc. in Boston predicts that U.S. businesses will spend just under \$16 billion this year to comply with laws

such as the Sarbanes-Oxley Act. And most of that will go toward technology that automates the oversight of business processes. AMR says. Little wonder, then, that vendors are banging on your door with "compliance solutions."

Josiah Gill, CEO of Fremont, Calif.-based Varsa Systems Inc., says his company has offered compliance monitoring technology for SAP systems since 1996, well before "Sarban-Ox" became an IT curse word. He claims that Varsa already does compliance monitoring for 1 million end users. Its Continuous Compliance software checks 120,000 rules before a transaction is processed by SAP applications. If the software detects a compliance or business process violation, it can halt the transaction.

This week, Varsa will ship its \$30,000 Risk Terminator module, which addresses a

**\$80B**

AMR's estimate for IT compliance spending in 2010

concern expressed by administrators have too much power over systems and might have unsavory intentions regarding circumventing corporate financial controls. Risk

Terminator lets IT do its thing, but if the software detects that something fishy is going on, it reports the suspected transgression to a compliance manager. Pricing for the Continuous Compliance suite starts at around \$300,000. Sometime this summer, Varsa is planning to add a version for users of Oracle Corp.'s applications.

Also this week, Opsware Inc. in Sunnyvale, Calif., unveils Version 5.1 of its Server Automation System monitoring software, which comes with new tools called Compliance Automation. With them, you can set policies at the COM object or operating system registry level to make sure there's no hanky panky

## HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

conducted on your servers. Sharmila Shahani, Opsware's senior vice president of marketing, claims that another new feature, Express Automation, can identify up to 300 servers on your network and all the software running on them within an hour. A couple of hours later, those servers can be loaded with Opsware agents to ensure that they obey the law, she says. Pricing for the full set of monitoring tools is \$1,200 per server.

Meanwhile, Immanix Corp. in Livermore, Calif., next week plans to announce its existence along with a line of identity management tools. "Sarban-Ox is definitely the No. 1 driver out there for identity management," says CEO Robert Haaverson. He argues that the majority of identity management projects that fail do so because "they try to boil the ocean." Identity management is better taken "in small steps," Haaverson advises. One such step he heartily advocates is to use the Immanix Directory Transformation Manager, which synchronizes multiple directories so IT staffers can get their arms around everyone's access rights and privileges. Pricing is as low as \$5 per end user.

## IT monitoring, yes—but not for . . .

... compliance purposes. Newton, Mass.-based Heroix Corp. this week will announce the availability of its agent-free Heroix Longitude software for monitoring your IT infrastructure. The company's existing Heroix EQ technology relies on agents to keep tabs on IT equipment and software. But company CEO Howard Reisman says agents can create problems



for IT, such as when departmental owners of servers refuse to load up their machines with agent code. Longitude queries servers using industry standards like Windows Management Instrumentation and Java Management Extensions, according to Reisman.

Starting at \$299 per server, Longitude monitors virtually everything on your network, including operating systems, databases, messaging systems, Web servers and any Java 2 Enterprise Edition application.

## Remember IMS? Few people do, which . . .

... is why you might need a new remote monitoring service that's being unveiled this week by Neon Enterprise Software Inc. in Sugar Land, Texas. According to CEO Don Pate, most Fortune 1,000 firms continue to run IBM's hoary IMS database on their mainframes. And with IBM working on Version 10 of the hierarchical database, which was introduced in 1968, it's likely that many companies will continue to use IMS. Unless, of course, they run out of administrators who know the tricky database. The current shortage of IMS database admins "is a blood-out-of-the-neck issue" for IT managers, Pate claims. So he hopes they'll be interested in Iserve. The new service provides monitoring of your IMS systems from Neon's Texas data centers, using the company's Mission Control for IMS software. Expect Iserve to start at about \$300,000. **Q 54356**

**19k**

Annual spending on DBA in 2004 was up 10% from 2003, according to the Burroughs-Lester Strategy Group







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Q3 97	\$6.2B	19
Q4 97	\$5.6B	78

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# IBM Buys Open-source Vendor

Gains Gluecode's low-end application server to complement WebSphere

BY HEATHER HAVENSTEIN

**I**N A MOVE that marked its entry into the open-source application infrastructure market, IBM acquired Gluecode Software Inc. last week. Terms of the deal weren't disclosed.

Gluecode, based in El Segundo, Calif., provides self-storage and related subscription support services based on open-source technology from the Apache Geronimo application server. IBM expects to offer the technology as a low-end, open-source alternative to its WebSphere systems.

The deal — IBM's first purchase of an open-source vendor — solidifies IBM's commitment to such technologies, said Robert Rosen, president of IBM user group Share.

"They have recognized that WebSphere is not an inexpensive product to acquire and support," said Rosen, a CIO at a federal government agency that he declined to name. "I can now invest in these types of technologies with the assurance that there is support out there. You're not hanging out there all by yourself."

The deal also points to IBM's belief that Apache

Geronimo, the J2EE server from The Apache Software Foundation, is the open-source application server of the future, said Robert LeBlanc, general manager of application and integration middleware at IBM.

Users "can start with the Gluecode [products] and ... move up to the higher-end

WebSphere offerings," LeBlanc said. "We are extending that WebSphere reach ... down to the lower end of the market."

IBM will allow users and business partners to download Gluecode application server software and start development and deployment for free. They can then purchase software support as needed from IBM, LeBlanc said.

Nathaniel Palmer, an analyst at Delphi Group in Boston, called the Gluecode acquisi-

tion IBM's most significant since it bought Lotus Development Corp. in 1995. Under the Gluecode model, IBM can use the work of thousands of volunteer Gluecode developers and then bring that work to market as tested, validated and value-added software, he said. Gluecode's flagship offering is an integrated Apache-based open-source stack, and its managed service provides users with automated software assembly of a core set of open-

source projects and source code management.

"The potential is there now to expand greatly with access to IBM resources," Palmer said. "It removes a major integration burden. We're talking about just about any project being developed in the J2EE environment that will now be offered in those models."

As part of the deal, IBM will become an active contributor to the Apache Geronimo open-source project and will expand the existing community of developers that work on the project, officials said.

© **S4390**

## Check Point Unifies Security Management

BY JAIKUMAR VIJAYAN

Check Point Software Technologies Ltd. today will announce tools designed to support unified management of its network perimeter, intrusion-detection and Web application security devices.

As part of its NGX Technology Platform initiative, Check Point will also release an upgraded version of its flagship VPN-1 firewall and virtual private network technology featuring support for the unified management capability.

By the end of the month, the Redwood City, Calif.-based vendor plans to similarly enable more than 20 of its other products, said Dave Burton,

### Check Point's NGX Initiative Includes:

Unified management of VPN-1, the Info-Sec intrusion-detection system, and the Connectix Web application gateway.

SmartGuard, a Web application designed to help security teams respond to threats.

Central, a security event management console.

Check Point's director of product management. The upgrades will be available at no extra cost to current users. The unified management

software taps into growing user demands for more easily administered security products, Burton said, adding that the many point products can't be managed efficiently on an individual basis. The software will let users deploy and manage Check Point's products via a single Web-based administrative console, he said.

Cisco Systems Inc. this month announced a line of multifunction security appliances that addresses similar issues. Unlike Check Point's new software, though, Cisco's appliances integrate various security functions into the same box [QuickLink S4248].

The Maryland Department

of Public Safety and Correctional Services has been beta-testing Check Point's unified management technology and plans to use it to administer about 400 of the vendor's VPN devices that are due to be installed soon.

"The new management interface will let me configure all my edge devices from one location," said Victor Fooks, the agency's chief network officer. "It helps me with management and maintenance."

Ryno Barnard, director of technology at Tiger Management LLC, a New York-based hedge fund, said the consolidation of security management functions should help users reduce the costs associated with deploying and managing point products.

Tiger has 20 site-to-site VPNs and expects to increase that number to about 80 such networks over the next few months. "Consolidating the management of these boxes is critical," Barnard said.

But Fooks said that one area Check Point needs to address is the lack of visibility into the number of end users who access the network through a managed VPN appliance. Because the central management console doesn't provide that information, it can be difficult to know if license terms are being exceeded, he added. © **S4395**

## Microsoft Plans Lean Version of XP

BY CAROL JULIA

Companies with aging PCs running old and often unsupported versions of Windows will get a stripped-down operating system option from Microsoft Corp. at an undetermined future date.

Microsoft test work continued plans to develop a lean version of Windows XP, code-named Eger. The release will be targeted at government agencies and large businesses that are concerned about the security and manageability of PCs running Windows NT 4.0 and older versions of the

operating system, said Barry Goffe, a group product manager for Windows client software.

Goffe said buying new PCs is the best way to address these concerns, but he added that Eger should help users who aren't in a position to purchase hardware. Eger will take Windows XP Service Pack 2 as its starting point and make use of tools built for Windows XP Embedded to add and remove functionality, he said. "You can almost think of Eger as a hybrid between the two," Goffe noted.

Goffe said Eger is being designed to run six types of applications: Internet Explorer, Windows Media Player, a remote desktop client for accessing Windows Terminal Services, a third-party terminal services client, mainframe emulation software from other vendors and a mix of management and security tools.

The stripped-down operating system isn't intended to run major business applications or productivity software such as Office, although Goffe noted that users could access Outlook and Word through Terminal Services software. He added that Eger breaks

from the classic thin-client model in that it won't be a single-purpose offering for terminal services and will require patching.

"It's thinner than XP, but it's not a thin client, because it will still need a bit of care and feeding," said Gartner Inc. analyst Michael Silver.

Microsoft is "just about" ready to send a technical preview of Eger to a small number of customers for initial testing, said Goffe. He added that it's too early to say when Eger will ship and that he doesn't know how the product will be priced or distributed. © **S4393**







# IBM Buys Open-source Vendor

Gains Gluecode's low-end application server to complement WebSphere

BY HEATHER HANSEN/IBM

**I**n a move that marked its entry into the open-source application infrastructure market, IBM acquired Gluecode Software Inc. last week. Terms of the deal weren't disclosed.

Gluecode, based in 21 Seaside, Calif., provides subscription support services based on open-source technology from the Apache Geronimo application server. IBM expects to offer the technology as a low-end, open-source alternative to its WebSphere systems.

The deal — IBM's first purchase of an open-source vendor — solidifies IBM's commitment to such technologies, said Robert Rosen, president of IBM user group Share.

"They have recognized that WebSphere is not an inexpensive product to acquire and support," said Rosen, a CIO at a federal government agency that he declined to name. "I can now invest in these types of technologies with the assurance that there is support out there. You're not hanging out there all by yourself."

The deal also points to IBM's belief that Apache

Geronimo, the JEE server from The Apache Software Foundation, is the open-source application server of the future, said Robert LeBlanc, general manager of application and integration middleware at IBM.

Users "can start with the Gluecode [products] and ... move up to the higher-end

WebSphere offerings," LeBlanc said. "We are extending that WebSphere reach ... down to the lower end of the market."

IBM will allow users and business partners to download Gluecode application server software and start development and deployment for free. They can then purchase software support as needed from IBM, LeBlanc said.

Nathaniel Palmer, an analyst at Delphi Group in Boston, called the Gluecode acquisition

IBM's most significant since it bought Lotus Development Corp. in 1995. Under the Gluecode model, IBM can use the work of thousands of volunteer Gluecode developers and then bring that work to market as tested, validated and value-added software, he said.

Gluecode's flagship offering is an integrated Apache-based open-source stack, and its managed service provides users with automated software assembly of a core set of open-

source projects and source code management.

"The potential is there now to expand greatly with access to IBM resources," Palmer said. "It removes a major integration burden. We're talking about just about any project being developed in the JEE environment that will now be offered in those models."

As part of the deal, IBM will become an active contributor to the Apache Geronimo open-source project and will expand the existing community of developers that work on the project, officials said.

© 54380

## Check Point Unifies Security Management

BY JAYKUMAR SVARNY

Check Point Software Technologies Ltd. today will announce tools designed to support unified management of its network perimeter, intrusion-detection and Web application security devices.

As part of its NGX Technology Platform Initiative, Check Point will also release an upgraded version of its flagship VPN-1 firewall and virtual private network technology featuring support for the unified management capability.

By the end of the month, the Redwood City, Calif.-based vendor plans to similarly enable more than 20 of its other products, said Dave Burton,

Check Point's NGX initiative includes:

Check Point's director of product management. The upgrades will be available at no extra cost to current users.

The unified management

software taps into growing user demands for more easily administered security products, Burton said, adding that the many point products can't be managed efficiently on an individual basis. The software will let users deploy and manage Check Point's products via a single Web-based administrative console, he said.

Cisco Systems Inc. this month announced a line of multifunction security appliances that addresses similar issues. Unlike Check Point's new software, though, Cisco's appliances integrate various security functions into the same box (Quicklink S4248).

The Maryland Department

of Public Safety and Correctional Services has been beta-testing Check Point's unified management technology and plans to use it to administer about 400 of the vendor's VPN devices that are due to be installed soon.

"The new management interface will let me configure all my edge devices from one location," said Victor Fooks, the agency's chief network officer. "It helps me with management and maintenance."

Ryan Berndt, director of technology at Tiger Management LLC, a New York-based hedge fund, said the consolidation of security management functions should help users reduce the costs associated with deploying and managing point products.

Tiger has 20 site-to-site VPNs and expects to increase that number to about 80 such networks over the next few months. "Consolidating the management of these boxes is critical," Berndt said.

But Fooks said that one area Check Point needs to address is the lack of visibility into the number of end users who access the network through a managed VPN appliance. Because the central management console doesn't provide that information, it can be difficult to know if license terms are being exceeded, he added. © 54386

## Microsoft Plans Lean Version of XP

BY GREGORY LARSEN

Companies with aging PCs running old and often untested versions of Windows will get a stripped-down operating system option from Microsoft Corp. at an undetermined future date.

Microsoft last week confirmed plans to develop a lean version of Windows XP, code-named Edgar. The release will be targeted at government agencies and large businesses that are concerned about the security and manageability of PCs running Windows NT 4.0 and older versions of the

operating system, said Barry Coffin, a group product manager for Windows client software.

Goffe said buying new PCs is the best way to address those concerns, but he added that Edgar should help users who aren't in a position to purchase hardware. Edgar will take Windows XP Service Pack 2 as its starting point and make use of tools built for Windows XP Embedded to add and remove functionality, he said. "You can envision that Edgar as a hybrid between the two," Goffe noted.

Goffe said Edgar is being designed to run six types of applications: Internet Explorer, Windows Media Player, a remote desktop client for accessing Windows Terminal Services, a third-party terminal services client, network emulation software from other vendors and a mix of management and security tools.

The stripped-down operating system isn't intended to run major business applications or productivity software such as Office, although Goffe noted that users could access Outlook and Word through Terminal Services and Word.

He added that Edgar breaks from the classic thin-client model in that it won't be a single-purpose offering for terminal services and will require patching. "It's thinner than XP, but it's not a thin client, because it will still need a lot of tools and tooling," said Gartner Inc. analyst Michael Silver.

Microsoft is "just about" ready to send a technical preview of Edgar to a small number of customers for initial testing, said Coffin. He added that it's too early to say when Edgar will ship and that he doesn't know how the product will be priced or distributed. © 54389



Your potential. Our passion.  
**Microsoft**

NAME

Mr. 50,000 Global  
Remote and Mobile  
Users Connected  
Without a VPN.

**NISSAN**



By upgrading to Microsoft® Windows Server™  
2003 and Exchange™ 2003, not only did  
Nissan IT meet the CEO's demand for better global collaboration, they expect to save at least \$1.35  
million by streamlining their messaging infrastructure. To get the full Nissan story or find a Microsoft  
Certified Partner, go to [microsoft.com/wssystem](http://microsoft.com/wssystem)

Toshiba Studio  
Laptop Computer

**Make a name for yourself with Windows Server System.** An upgrade to Microsoft® Windows Server System™ made it possible for 50,000 worldwide employees at Nissan Motor Company to have more secure remote access to their e-mail and calendars from any Internet connection, without the hassle and expense of a VPN. Here's how: By deploying Windows Server™ 2003 and Exchange 2003, not only did Nissan IT meet the CEO's demand for better global collaboration, they expect to save at least \$1.35 million by streamlining their messaging infrastructure. To get the full Nissan story or find a Microsoft Certified Partner, go to [microsoft.com/wssystem](http://microsoft.com/wssystem)





## BRIEFS

## Sun Buys Rights to NAS Technology

Sun Microsystems Inc. will pay Procom Technology Inc. \$50 million to buy the intellectual property rights to the network-attached storage technology used in Sun's StorEdge 5000 products. Sun currently licenses the technology from Procom. Sun said that once the deal closes, which is expected by June, it will have the engineering expertise it needs to build file-based storage systems faster and cheaper than it can now.

## IBM Takes Orders For Opteron Blade

IBM has started taking orders for its first ultrathin blade server to be built on Advanced Micro Devices Inc.'s Opteron processor. The server, called the AMD Opteron LS20, is based on IBM's BladeCenter design and will be available with a special low-power version of Opteron. The new server is priced from \$2,250 and will begin shipping next month.

## ScanSoft Buys Rival In \$220M Deal

ScanSoft Inc. has agreed to buy speech-recognition software rival Nuance Communications Inc. for about \$220 million in stock and cash. ScanSoft expects to save \$20 million to \$25 million annually through cost reductions from combining the two companies. At the end of 2004, the vendors together controlled 77% of the market for speech server systems, according to Gartner Inc.

## Hitachi and Fujitsu Add New Drives

Hitachi Global Storage Technologies Inc. and Fujitsu Ltd. have each begun shipping new notebook hard disk drives that offer more storage capacity and better performance than previous models. Both Hitachi's Travelstar 7K1000 series and Fujitsu's MIV21000H drives are 2.5-in. models and are available with a maximum capacity of 10GB.

## Microsoft Exec Says No Big Licensing Changes on Horizon

Pricing VP defends vendor's Software Assurance program, touts renewal rates

BY CAROL BLIVA

FOUR YEARS AGO this month, Microsoft Corp. faced a firestorm of criticism when it introduced its Licensing 6.0 software-pricing program. Ever since, the company has been working to reduce the licensing program's complexity and add value to components such as its Software Assurance upgrade and maintenance offering. Brent Callinicos, who last year took the reins as vice president of worldwide licensing and pricing at Microsoft, spoke with ComputerWorld last week about the continuing simplification efforts. Excerpts from the interview follow:

**Is there a Licensing 7.0 in the works?** There will not be a 7.0. These themes will continue—customer flexibility, reduced complexity, more customer choice.... We change things as necessary. There is no, "We've got to change it just because it's been a year or it's been two years." If it works, we're not going to change it. If it needs enhancing, we're going to change it.

Microsoft has been working to enhance the Software Assurance program. Are you finding that customers have a good grasp on everything to which they're entitled? We've added about 14 benefits to it. One of the other things that we need to do is make sure that people understand exactly what benefits they have. There are tools that have been put out for that, [but] there's more education we need to do. We've started to ask customers to understand what benefits they have

and activate those benefits.

**Is that enough to get more people to buy Software Assurance?** Our latest data is that two-thirds to 75% of our Enterprise Agreement customers have renewed. ... People aren't viewing this as a three-year deal. That's why you get those renewal

rates. People can look at an ROI over a 10-year period and their total cost of ownership and what they get for the licensing, their own individual upgrade cycles, etc. We want to make sure that entire package is valuable not just in a three-year period, but over the longer-term period of time. I'm not interested in having customers for just three years.

**What other enhancements are you looking at to further increase the value of Software Assurance?** We have nothing to announce at this time. Stay tuned.

**When can users expect to see something—weeks, months?** It's not in weeks. I don't want to preannounce anything before we can actually do an excellent job of delivering it to customers and operationalizing it.

**Some Microsoft products, such as SQL Server and desktop Windows, are on five-year release cycles, but the typical license term is three years. That means some users won't get an upgrade during their contract term frame. Is anything more going to be done to address that?** Obviously, two-thirds to 75% of our customers view it as a longer relationship. Otherwise, we're not getting those renewal rates.

**What's the biggest thing you'd like to clarify for users who might have misconceptions about your licensing policies?** That Software Assurance is about more than just the upgrade.... There are numbers of customer case studies where we've seen, as they activate things, their perception of the nonupgrade portion changes.

**I'm not interested in having customers just for three years.**

.....  
BRENT CALLINICOS,  
VICE PRESIDENT, MICROSOFT CORP.

And we want to continue to enhance that value such that people stop thinking about it as just an upgrade.

**What sort of pressure are you feeling to make changes to your licensing policies as a result of the growing popularity of open-source software?** Obviously, the open-source competition is something that is real, [and] not just overseas versus here.... [But] it is becoming a rational conversation around total cost of ownership and things like that. And it's not really related to licensing. **Q 54307**

## READ MORE ONLINE

Go to our Web site for an expanded version of the interview.

QuickLink 54307  
[www.computerworld.com](http://www.computerworld.com)

## Microsoft Simplifies Software Usage Rights Guide

MICROSOFT last week disclosed plans to simplify the 107-page document that details the ways in which customers can use the software products they license from the company.

By stripping out repetitive passages for products that share the same or similar usage rights, Microsoft will be able to reduce the document's length to 44 pages, according to a spokesman for the software vendor.

In the streamlined document, which is due to be released on July 1, Microsoft's offerings will be grouped into nine categories, such as server operating systems, specialty servers and desktop applications. Each

product category will have a specified set of usage rights, said Brent Callinicos, the company's vice president of worldwide licensing and pricing.

Currently, each of Microsoft's 70-plus products has its own usage-rights section. "This effort was essentially to look for where we meant the same thing," Callinicos said. "Beforehand, it was more confusing than it needed to be."

Users didn't necessarily express confusion about the existing usage-rights document, he said, but they often asked questions about how they were allowed to use software, such as when they needed a client ac-

cess license for a server product, he added.

Allen Park, an analyst at Gartner Inc., said he recognizes a significant number of client calls from Microsoft users about product use rights. "Customers shouldn't have to wade through 107 pages," he said. "It's just a pain in the rear."

The changes to the usage-rights document are the latest step in Microsoft's overall effort to reduce the complexity of its licensing policies. But the company isn't modifying the licensing terms for any of its products as part of the changes, Callinicos said.

—Carol Sliva



You've got more and more data stored.  
(That means you've got more and more data at risk.)



Veritas FilePro 2

Overland Storage RED 110  
Protection PAC

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•  
•  
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Microsoft Windows  
Standard Edition

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369<sup>80</sup>

4779<sup>80</sup>

Microsoft

709<sup>81</sup>

CDW Storage Solutions You Need With You Need Them







## GLOBAL DISPATCHES

### South African Nations to Standardize Cyberlaws

LUSEKA, ZAMBIA

**T**HIRTEEN SOUTH AFRICAN countries of the Southern African Development Community (SADC) plan to harmonize their cybercrime laws to raise the prosecution of cross-border crimes, according to government officials.

The SADC is an economic bloc, headquartered in Gaborone, Botswana, that also includes countries such as South Africa, Zambia, Mauritius, Malawi, Swaziland and the Democratic Republic of Congo. Abel Chambezi, Zambia's minister of transport and communications, said last week that all SADC countries have agreed to enact common cybercrime laws by the end of next year. One provision will make it easier to extradite criminals within the SADC region, Chambezi said. South Africa, Zambia and Mauritius have cybercrime laws that may need to be altered, while other countries, such as Botswana, have no such laws.

One challenge will be agreeing on minimum jail terms, Chambezi said.

### An International IT News Digest

For example, Zambia's cybercrime law punishes convicted hackers with up to 25 years in jail, but some IT professionals in the country have argued that such penalties are too harsh.

■ MICHAEL MALAKATA, IDG NEWS SERVICE

### German Medical Group Starts Huge BI Project

**B**ERLIN BASED Kaiserliche Bundeserkrankung (KBV) — Germany's equivalent of the American Medical Association — has selected a team of IT vendors led by QlikTech Inc. for what is being touted as the largest business intelligence project in Germany to date. The contract was announced last week by Raleigh, N.C.-based QlikTech and Intel

Corp., one of its partners.

New health care reforms in Germany require the KBV to analyze anonymous patient data and issue quarterly reports about patient outcomes and other performance indicators. Each quarter, the organization's accounting department has to analyze about 2 billion records from physicians, amount-

ing to between 15TB and 20TB of data.

The KBV is using QlikTech's QlikView analytics software running on Hewlett-Packard Integrity servers that are based on Intel's six-bit Itanium 2 processors. QlikView analyzes massive amounts of data quickly by loading it directly into memory. That capability exploits Intel's 64-bit technology, which eliminates the 4GB-addressable memory limit of 32-bit architectures.

### British Airways Taps Cisco for VoIP Deal

LONDON

**B**RITISH AIRWAYS PLC, Europe's third-largest airline, has picked Cisco Systems Inc. to build a voice-over-IP telephone system for its 14,000 office and airport workers. Cisco, which announced the contract last week, didn't disclose the financial terms other than to say it's a "multi-million-pound" deal that's expected to produce a payback within two years.

By next March, London-based British Airways expects to be using 8,500 Cisco IP phones, along with the vendor's CallManager call-processing software and MeetingPlace conferencing application, over an Ethernet network, Cisco said. The project includes replacing a legacy phone system in Terminal 4 at Heathrow Airport just west of London. ■ 54355

■ LAURA RONDE, IDG NEWS SERVICE

Compiled by Mitch Betts

## Briefly Noted

**Flash Applications in Park-**lands, South Africa, has created that country's first online auction site for commercial real estate, including office and retail buildings, industrial properties, and land available for development, according to Frank Reardon, managing director of the company, known as eProp. The new Web site is located at [www.propertyauctions.co.za](http://www.propertyauctions.co.za). ■ COMPUTING SOUTH AFRICA

**Integrated Capital Services**, a division of Darden Ltd. in Birmingham, England, recently announced a Flash application that combines news syndication, speech and avatar technologies to give Web sites a virtual newscaster that can read corporate announcements. The Newscaster, which starts at \$2500 (\$841 U.S.), can read RSS feeds, for example.

**Wayport Inc.**, an Austin-based provider of mobile broadband services, last week announced the acquisition of HotPort Inc., a Copenhagen-based company that offers high-speed Internet access at hotels in Europe and the Middle East. Financial terms weren't disclosed.

### GLOBAL FACT

Market penetration of mobile phones in Italy last year, it reached 100% because some people have multiple phones.

## Free Trade Plan Isn't Seen As Big Deal for Offshore IT

BY PATRICK THIBODEAU

The U.S.-Central America Free Trade Agreement that's now before Congress is supported by IT industry trade associations but opposed by high-tech labor groups, which see it as having the potential to erode jobs in the U.S.

In terms of outsourcing IT work such as application support and maintenance, through the proposed agreement — known as CAFTA — isn't likely to make Central America more attractive than India or China, according to analysts.

The region isn't well equipped with either the IT or human resources needed to effectively compete for tech-

nology work or to provide call center services for non-Spanish-speaking markets, said Michael J. Pisani, an associate professor of international business at Central Michigan University in Mount Pleasant.

The economic power of the countries that would be covered by CAFTA is "immuscular," noted Kevin Gallagher, a researcher at Tufts University's Global Development and Environment Institute in Medford, Mass. "It's like we're liberalizing trade with New Haven," he said, referring to the city in Connecticut.

CAFTA countries include Costa Rica, the Dominican Republic, El Salvador, Guatemala,

Honduras and Nicaragua.

Costa Rica is seeing some high-tech development. Intel Corp., for instance, has a major manufacturing and assembly facility in that country.

"Costa Rica is already an attractive place," said Jared Carleton, a Palo Alto, Calif.-based analyst at Frost & Sullivan Ltd.

Costa Rica has a high literacy rate, and a university graduate can expect to make about \$1,000 a month working in IT development there, said Carlos Araya, CEO of ArinSoft Inc., a maker of automated data migration tools based in San Jose, Costa Rica's capital city. Araya said he believes that CAFTA will create opportunities in Central America for marketing and investment from the U.S. But Costa Rica has a limited labor pool; its population is only about 4 million.

There are benefits for U.S. companies that set up IT or outsourcing operations in free-trade countries, including lower costs, said Evan Chuck, a partner in the international trade and transactions group at law firm Bryan Cave LLP in Los Angeles.

Chuck said CAFTA would remove some tariffs on equipment that has to be moved to Central American countries and provide greater levels of

### Job Exports

The estimated number of U.S. IT jobs shifted to developing nations over the past two years:

22,400	251,400
2003	2004

intellectual property protection, which may be important to companies that outsource code development.

Some labor officials see CAFTA as making it easier for IT vendors to set up operations in Central America. But because the countries there are relatively small, there isn't likely to be any appreciable gain in U.S. exports, they argue. CAFTA "fails to open any new markets," Marcus Courtney, who heads the Washington Alliance of Technology Workers in Seattle, said during a teleconference.

But in a separate teleconference, Rick White, CEO of TechNet, a Palo Alto-based industry group, said CAFTA countries already represent "a significant market for U.S. tech goods" of about \$2.6 billion per year. ■ 54396







**GLOBAL****South African Nations to Standardize Cyberlaws**

LIBERIA, ZAMBIA

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**An International IT News Digest**

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■ **LAURA RÖHDE, IDG NEWS SERVICE**

Compiled by Mitch Betts.

**Briefly Noted**

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**Advanced Chatbot Solutions, a division of Studer Ltd. in Wokingham, England, recently announced a French application that combines voice recognition, speech and content technologies to give Web sites a virtual conversationalist that can read corporate announcements. The Humatalk, which starts at \$250 (200 U.S.), is now read R&D funds, for example.**

**Wagport Inc., an Austin-based provider of mobile broadband services, last week announced the acquisition of NorthStar AG, a German-based company that offers high-speed Internet access at hotels in Europe and the Middle East. Financial terms weren't disclosed.**

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**Job Exports**

The estimated number of U.S. IT jobs potentially moving to other countries this year.





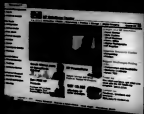
# WE MAKE IT WORK

FOR THE MOBILE  
WORKFORCE

## CASE STUDY Fueling Flight

A growing insurance  
company without previous  
activation...  
each user...  
and in...  
aircraft...  
The...  
miss...

HP Compaq Business  
Starting at \$999



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# Supply Chains Put to the Test by Global Reach

Users looking for more scalability, better integration

BY MARC L. SONDHI  
FRIEDMAN

**G**LOBALIZATION is having a hefty impact on companies' supply chain management systems, requiring greater scalability of applications and better integration with far-flung partners.

That was a key theme repeated by attendees of 12 Technologies Inc.'s Planet 2005 user conference here last week.

With cheap manufacturing, distribution and supplier resources available overseas — particularly in the Far East — even companies with established supply chain backbones are finding that they need to adapt to survive, users said.

These global companies,

facing ever-increasing profit margins, see an increasing need for centralized, accurate data, greater integration and the ability to respond nimbly to changes in demand.

For instance, at Payless ShoeSource Worldwide Inc., planners must factor some 22 billion variables when crunching annual supply and demand numbers, said Duvel Pavelka, senior vice president at the shoe retailer's merchandise distribution, planning and supply chain unit.

The Topco, Kan.-based company runs 12's Merchandise Planner software, and when making supply chain decisions, its system must account for 4,600-plus stores, 2,000 unique brands of footwear and 13 sizes, as well as 200 factories in seven countries, said Pavelka.

Supply chains also suffer from an inconsistent world-

wide infrastructure, said Kevin Bott, vice president of supply chain solutions and technology services at Miami-based Ryder System Inc., which uses 12's Transportation Manager.

While North America and Europe have sophisticated telecommunications systems to support enterprise tools, Southeast Asia is "an entirely different ballgame," Bott said.

"The infrastructure is not as good there. In China, some stuff is being horse-drawn and there is no technology [to support supply chain processes]."

## 40 Years Behind

Places where contract suppliers or manufacturers are technologically behind are much like North America was 40 years ago, when supply chain systems began to be automated, said Ellen Martin, vice president of supply systems at apparel maker VF Corp. The

Greensboro, N.C.-based company runs 12's Demand Fulfillment and Supply Chain Planner products.

Martin noted that because companies have already implemented supply chains — and are now savvy — when they first installed them — it won't take 40 years to get overseas operations up to speed. But "it will take a lot more creativity," she said.

VF is now contracting with suppliers and manufacturers in the Far East, which requires a high level of trust, said Martin. She said she would like to see vendors such as 12 and SAP AG — which provides VF with its ERP backbone — be more willing to collaborate so data can be easily integrated between their systems.

Logistics is also a vulnerable point in a global supply chain, noted Dick Hunter, vice president, Americas, for manufacturing and distribution operations at Dell Inc., which runs 12 Factory Planner and Supply Chain Planner. Dell imports inventory from China and Korea, and receiving it on time is crucial, he said.

Companies are beginning to realize that their supply chains are global and need to be centralized, said Gartner Inc. analyst Dwight Klappich. Some companies run multiple supply chain applications in different regions and don't consolidate the data in one place. They're finding that integration task to be difficult, he said.

Dell's 12 is looking to address a number of those issues, offering more extensive training services and, from a technology perspective, what it calls the agile business platform.

Michael McGrath, 12's CEO, said that the new platform can help companies get supply chain installations up and running in as little as four months by allowing them to snap in applications on a Microsoft .Net- or IBM WebSphere-based middleware platform.

■ 54390

## MCGRATH SPEAKS

CEO Michael McGrath talks about some of the actions he's taken to move 12

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## PLM

the first phase of a product-specification system that's built around PLM tools. The system initially is being used in North America and is due to be deployed worldwide by the end of next month.

It's designed to manage the creation, approval and distribution of all technical specifications related to the raw materials, packaging and standards associated with the company's products. Currently, the system contains more than 250,000 specifications, according to Sautosh Jiwiraka, vice president of quality assurance for Johnson & Johnson's consumer and personal products group.

Jiwiraka said during a panel discussion at the conference, which was held by PLM software vendor MatrixOne Inc., that the new system will re-

place 25 other data repositories and have a total of about 4,000 end users.

"We wanted to enable faster product development workflow," Jiwiraka said. With the company's product development centers and supplier base becoming increasingly globalized, the PLM capabilities should "improve information visibility, specification standardization and communication in change management," he added.

The system is also expected to make it easier for New Brunswick, N.J.-based Johnson & Johnson to comply with regulatory reporting requirements worldwide, Jiwiraka said. He didn't address the expected cost of the system during the panel discussion.

Two years ago, The Procter & Gamble Co. completed the



12's CEO Michael McGrath says the company's PLM software has helped P&G save millions of dollars on suppliers.

rollout of a similar specification management system using a mix of its own tools and PLM software from Westford, Mass.-based MatrixOne.

P&G's system contains more than 700,000 specifications and has helped the Cincinnati-based company save mil-

lions of dollars on supplies such as packaging materials and colorants, said Dan Blair, director of worldwide technology standards and systems. Before the system was put in place, P&G was unable to take full advantage of economies of scale in areas such as raw materials purchasing, Blair noted. He declined to comment about the system's cost in an interview.

The company plans to use the information stored in the specifications management

system for new applications, Blair said. One example is a so-called country-of-sale application that is expected to improve P&G's ability to correctly match packaging materials and artwork to the products it sells in different countries.

"PLM has evolved from an engineering-centric concept to a strategic enterprise type of initiative," said Mark Halpern, an analyst at Gartner Inc. "In many ways, PLM today is where ERP was 10 years ago."

Just as ERP systems integrated disparate functions such as finance, inventory management and materials requirements planning, PLM tools are being used to tie together tasks such as product design, authoring of engineering documents and management of product and configuration data, Halpern said.

Linde AG, a Weisbaden, Germany-based engineering and manufacturing company, is using a consolidated prod-

uct data management system to enable collaboration among its distributed development teams.

Company officials now are evaluating the system to see if it can also be used for real-time project management to provide status information "down to the part level," said Andre Scholz, head of technical systems at Linde's materials handling group.

Trane, a Piscataway, N.J.-based unit of American Standard Cos. that makes air conditioning systems, is currently implementing PLM technology as part of a broader effort to improve its materials reuse and configuration management processes.

The company also hopes to increase employee productivity and reduce the time it takes to bring products to market, said Trane CIO David Gregory. "It's really about getting smarter about how you do things," he noted. ■ 54397







# Supply Chains Put to the Test by Global Reach

Users looking for more scalability, better integration

BY MARIO L. DOMENEZ  
PHOTO © JEFFREY

**G**LOBALIZATION is having a hefty impact on companies' supply chain management systems, requiring greater scalability of applications and better integration with far-flung partners.

That was a key theme repeated by attendees of I2 Technologies Inc.'s Planet 2005 user conference here last week.

With cheap manufacturing, distribution and supplier resources available overseas — particularly in the fast East — even companies with established supply chain backbones are finding that they need to adapt to survive, users said.

These global companies,

facing ever-thinner profit margins, seek an increasing need for centralized, accurate data, greater integration and the ability to respond nimbly to changes in demand.

In fact, at PayLess ShoeSource Worldwide Inc., planners must factor some 22 billion variables when crunching annual supply and demand numbers, said David Pavelka, senior vice president at the shoe retailer's merchandise distribution, planning and supply chain unit.

The Tupelo, Kan.-based company runs I2's Merchandise Planner software, and when making supply chain decisions, its system must account for 4,600-plus stores, 2,000 unique brands of footwear and 13 sizes, as well as 200 factories in seven countries, said Pavelka.

Supply chains also suffer from an inconsistent world-

wide infrastructure, said Kevin Bott, vice president of supply chain solutions and technology services at Miami-based Ryder System Inc., which uses I2 Transportation Manager.

While North America and Europe have sophisticated telecommunications systems to support enterprise tools, Southeast Asia is "an entirely different ballpark," Bott said. "The infrastructure is not as good there. In China, some stuff is being horse-drawn and there is no technology [to support supply chain processes]."

## 40 Years Behind

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CEO Michael McGrath said that some of the actions he'll take to realize I2.

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COMPUTERWORLD

# EXECUTIVE BRIEFINGS

EXECUTIVE GUIDES FOR STRATEGIC DECISION-MAKING

## Grid Computing

There are early adopters in the financial services industry, but grid computing has a way to go before it's in the corporate mainstream.

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STRATEGIC INSIGHTS FROM THE EDITORS OF COMPUTERWORLD



# Grid 101

I frequently talk about the electrical power grid or the telephone grid, and it's pretty clear what we mean: a

large, decentralized network with massive interconnectivity and coordinated management.

A grid is, in fact, a meshed network in which no single centralized switch or hub controls routing. Grids offer almost unlimited scalability in size and performance because they aren't constrained by the need for ever-larger central switches. Grid networks thus reduce component costs and produce a reliable and resilient structure.

Applying the grid concept to a computer network lets us harness available but unused resources by dynamically allocating and deallocating capacity, bandwidth and processing among numerous distributed computers. A computing grid can span locations, organizations, machine architectures and software boundaries, offering power, collaboration and information access to connected users. Universities and research facilities are using grids to build what amounts to supercomputer capability from PCs, Macintoshes and Linux boxes.

## Tapping Unused Capacity

When Novartis AG needed extra processing power, the pharmaceutical giant found it — 5 trillion floating-point operations per second of unused capacity, to be precise — in 2,700 desktop PCs at its headquarters in Basel, Switzerland. The company lashed the PCs together in a computing grid that

knows how to run number-crunching supercomputer applications that model the interactions between proteins and other chemicals that might be used in drugs.

"The grid has opened up a number of opportunities for us which were just not there before," says Marnett Pletsch, head of informatics and knowledge management at subsidiary Novartis Research. "People couldn't imagine doing the things that we are doing today on a routine basis."

The Novartis success story is far from unique. Drug companies, university computation centers, product development and engineering departments, federally funded research centers and a few financial services firms have set up computer grids. They report big savings in hardware costs, and sometimes productivity improvements as well.

Grids consist of geographically dispersed computers linked dynamically in order to present to users a unified view of computational resources such

as compute cycles, disk space, software or data. There are intracompany grids, such as the one at Novartis, and partnership grids, such as the National Science Foundation-sponsored TeraGrid.

Utility grids, which proponents say could provide unlimited on-demand access to computer resources in much the same way the U.S. electric power grid provides on-demand access to electricists, are a dream of companies such as IBM and Hewlett-Packard Co.

## Grid Limits

Today, most grid applications share three characteristics. First, they are computationally intensive. Second, most are written for parallel or massively parallel execution. Third, like the Novartis grid, most are built to harvest unused compute cycles. Some, however, focus on getting at distributed data or disk resources.

Although IT vendors tout grids for all kinds of applications, grids have barely begun to move beyond scientific, engineering and mathematical/statistical applications. One reason is that most business applications weren't written with parallel processing in mind, so they're less able to take advantage of the many semi-independent processors that form grids.

"Parallelizing these applications is a major rewrite," says Carl Greiner, an analyst at Gartner Inc. "That's why grids are having a difficult time in the commercial space." It will be five years before applications such as supply chain systems become suitable for grid computing, he predicts.

Another impediment is that tools for monitoring usage, charging for usage and even ensuring security in grids aren't well developed. Greiner says. The lack of such capabilities is especially troublesome when a grid spans multiple departments or companies, he adds.

In a survey of 50 companies sponsored by Platform Computing Inc., a developer of grid software in Markham, Ontario, 89% of respondents cit-

## Three Types of Computing Grid

• Horizontal or scaled-out computing such as a Web server farm

• Coordinated independent computers

• Small set of tightly centralized computers







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## Introduction

ed organizational politics as a barrier to implementing grids. Objections included fear of losing control of IT resources — or “server bugging” — and fear of a reduction in the IT budget.

Ahmad Abbas, managing director of Grid Technology Partners in South Hadley, Mass., sums up the obstacles to more widespread adoption of grids this way: “You have to really understand your applications — can I distribute them?” But, Abbas says, vendors are helping users get applications grid-enabled.

For example, IBM offers a version of its WebSphere Application Server that lets users bring a collection of servers into a grid to balance the workloads across several WebSphere applications. A future enhancement will also support non-WebSphere applications in the grid, IBM says.

### Toward Enterprise Adoption

Web services hold the key to grid computing for commercial applications, Abbas says. “The way business applications will take advantage of the grid is through XML, UDDI, SOAP and WSDL. The Open Grid

Services Architecture [standard] takes all the capabilities that grid can offer and makes them appear in the same nomenclature as a Web services application,” he says.

Considerable work on grid standards is now under way among vendors, users and researchers. But many applications don’t yet conform to the standards, and even some grid product vendors say the standards aren’t mature enough for commercial applications.

Slowly, grid computing appears to be heading toward wider enterprise adoption. Steve Yanko, IT head of global R&D at Credit Suisse First Boston LLC in New York, sees grid use as key to developing service-oriented computing across the enterprise that focuses on delivering services to business users. In that case, the technology becomes secondary, he says. The value of IT “will come from managing the whole and not the individual components,” says Yanko, whose IT department manages 20,000 desktops and 9,000 servers.

While some IT departments are trying to reduce the number of ven-

dors they deal with and consolidate on a single technology platform, Yanko says he believes in using best-of-breed systems built to open standards that allow interoperability.

That’s necessary to “attack the complexity problem,” he says, adding that “[vendor] partnering will be critical — more critical than ever before.”

But before grid computing can get widely established, IT managers first need to “find ways to automate those areas that are very labor-intensive — that’s going to be the key for being able to afford these new technologies,” Yanko says.

Robert Cohen, an economist at the Economic Strategy Institute in Washington, claims that grid use will have a significant impact on U.S. companies in the coming years, boosting productivity by 25% in a number of areas, such as the pharmaceutical and automotive industries, within six years.

“[Grid’s] potential to change business processes and change efficiencies within companies is dramatic,” says Cohen. “The companies that have begun to do it see it, and it’s in their bottom line.”

Grid computing has emerged on the IT scene amid hype and confusion. This report provides a “Grid 101” introduction that clarifies the terminology and possibilities. Then it identifies the early adopters — such as investment bank J.P. Morgan — and helps readers figure out when grid computing is applicable. The core of the report is a discussion of three technology issues: grid storage, grid security and “the data grid.” Finally, the report covers management issues involving software licensing, project management and the IT staff skills required for grid computing.

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## COMPUTERWORLD EXECUTIVE BRIEFINGS

### Grid Computing

There are early adopters in the financial services industry, but grid computing has a way to go before it's in the corporate mainstream.

BY ROBERT COHEN  
Economic Strategy Institute

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8. How to avoid painful gotchas when benchmarking and managing your network.
7. Simple truths about adding real-time collaboration applications to your converged infrastructure.
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## Server Break-ins Linked to Year-Old Cisco Hack

Theft of source code prompts wide probe

BY SCARLETT PRUITT AND GRANT CROSS

A theft of computer source code from Cisco Systems Inc., announced a year ago, has led to a worldwide investigation of potential criminal activity involving multiple server break-ins in several countries, according to the FBI.

Swedish police last week confiscated computer equipment from a 16-year-old during an investigation related to the Cisco theft, according to police officials. The teenager, whom the police didn't identify, was released to his or her parents.

In addition, the U.K.'s Metropolitan Police Service arrested a 20-year-old man in September. The suspect's computer equipment was confiscated, but he was later released, according to a Metropolitan Police spokesman.

"As a result of recent activities that have taken place, the criminal activity

appears to have stopped," said Bill Carter, an FBI spokesman.

Officials with the Metropolitan Police and the FBI said the investigation is ongoing. The FBI, working with law enforcement agencies in several other countries, is looking into "sophisticated" criminal activity involving multiple server intrusions in several countries, Carter said. He wouldn't comment on specific attacks.

### Targeted Attacks

After the Cisco source-code theft was announced in May 2004 [QuickLink 46999], security experts expressed concern that hackers could use the code to look for security holes in Cisco products.

Companies often connect Cisco's networking products directly to the Internet without firewalls or other security products.

Cisco officials applauded the Swedish arrest. "We are very encouraged that an arrest has been made in

Sweden and will continue to work with the appropriate law authorities," said David Cook, a Cisco spokesman.

"We will take every measure to pro-

tect our intellectual property and take this issue extremely seriously, as you would expect," he said. **CS4399**

Pruitt and Cross are reporters for the IDG News Service. Henrik Svdden of IDG Sweden contributed to this report.

## Microsoft Unveils Win Mobile 5.0

Gates also confirms new Office delivery for '06

BY JONIS EVERS

Microsoft Corp. last week unveiled a new version of its operating system for mobile devices that it said offers increased reliability and improved hardware support.

At the annual Microsoft Mobile and Embedded Developers Conference in Las Vegas last week, Chairman and Chief Software Architect Bill Gates also confirmed that a new version of Microsoft Office will ship next year.

Handheld devices and smart phones running Windows Mobile 5.0, code-named Magneto, are scheduled to ship in the next few months, Microsoft said.

Enhancements include support for hard disks, additional types of wireless networks and persistent storage. New network functions include support for 3G high-speed networks and the addition of Wi-Fi in Windows Mobile-based smart phones, Microsoft said.

"We're moving well beyond just doing voice calls and SMS messages," Gates said in a keynote speech.

Coinciding with Microsoft's announcement, Dell Inc. and Hewlett-Packard Co. separately announced

plans to offer operating system upgrades of their Windows Mobile-based products. Pricing wasn't disclosed.

In his keynote, Gates revealed in the success of Windows Mobile in the past year. Today, 68 wireless service providers in 48 countries sell devices made by 40 manufacturers, Gates said.

### On Schedule

Although many industry insiders had speculated that the new version of Office would ship in 2006, Microsoft didn't disclose delivery plans until last week. A 2006 release is in line with Microsoft's two-to-three-year release schedules. The last major version, Office 2003, arrived late that year.

While Microsoft officials have long been coy about changes in the next Office release, Gates last week said the new release will enhance Office's workflow, rights management, advanced scheduling, document sharing and business intelligence capabilities.

Nailing down the Office ship date is a good step, said Rob Helm, an analyst at Directions on Microsoft Inc. Still, Microsoft should provide more details to the general public on its product plans, he said. **CS4397**

Evers writes for the IDG News Service.

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DON TENNANT

# Badge of Honor

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*Don Tennant*



MICHAEL H. HUGOS

# Architects And System Builders

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project when they use the techniques of process mapping and data modeling.

Our architect finished the design phase by producing specification documents containing the final floor plans, drawings of how the interior and exterior of the house will look, and plans for the electrical, plumbing, heating and cooling systems. These plans and drawings are what system builders produce when they do prototyping to show how system screens will look and what the technical architecture will be.

The documents our architect produced are quickly understandable by a wide range of other people. On our job, there are contractors who speak English, Polish, Russian, Spanish and Lithuanian. They all can read the design documents and do their jobs accordingly. Obviously, we in the IT profession can also create a similar set of documents to capture the design specifications of a system.

When we moved into the build phase, each subcontractor figured out how to do his work by using combinations of standard building components, from preconfigured wiring systems to standard sizes of lumber, plumbing and floor tiles — much like job-oriented design and programming.

As parts of the job are completed, my wife and I inspect the new rooms, and things that are wrong get fixed — just like the testing and rollout process for implementing a new system.

The profession of architecture is a noble blend of artistry and engineering. The approach taken by architects and the techniques they use reflect best practices that have evolved over centuries. When I see the parallels I have described, the practice of my own profession suddenly becomes clearer. My profession, too, is a noble blend of artistry and engineering. **■ 54206**

DAN GILLMOR

## IT Has a Stake in Podcasting

**J**UST WHEN YOU thought that you had a relatively firm grip on the latest in digital media, along comes podcasting.

What's casting? Podcasting, essentially an intriguing new way to distribute audio files, involves downloading an MP3 audio file to a digital device and listening to the program — a song, a lecture, a rant, whatever — when you want to listen to it.

Imagine: TV, the hard-disk television recording service, for radio or any other kind of audio content. Then imagine content creation by almost anyone, with no need for a fancy recording studio. Now you have the idea.

Actually, "podcasting" is a bit of a misnomer. It marries the iPod music player with broadcasting. But podcasts play nicely on my MP3-capable mobile phone.

What is IT's stake in this new genre? Perhaps a considerable one.

First, it can expand the conversation an enterprise has with its constituents: employees, customers, suppliers, communities. Quick chats with these folks are one way I envision podcasts being used. Imagine attaching premium human voices to what sometimes seem like soulless executive suites.



The best podcasts tend not to be the slickest ones. That is, production values aren't nearly as important as what's being said. Just as a good weblog exudes the writer's personality, so should a podcast.

Hook up a decent microphone and headphones to a PC running low-cost software — or no-cost, if you use a cross-platform open-source program like Audacity. Almost anyone can then produce a pleasant-sounding recording if the speaker has a pleasant voice. Editing is getting easier too.

New Web-based services are springing up as well. A small San Francisco company called Odeo, for example, is creating a service that will let users post and deliver content to other servers, which then deliver the content to other people via podcasting downloads.

For enterprises, the cost of delivering content won't be trivial if the podcasts become popular. Audio files aren't bandwidth hogs like video, but they aren't tiny, either. IT should consider using peer-to-peer services. It's also worth looking into new free hosting services such as Ourmedia.org, but

some require giving up certain copyright privileges.

Creating compelling content isn't trivial, however. Listen to a recording of yourself if you think I'm kidding. We don't all speak in sonorous radio voices — not that we have to be in a sphere where I'm convinced that authenticity matters more than acting ability.

Even if corporate leaders don't want to play the podcasting game, employees are increasingly going to listen to podcasts anyway. Radio stations are moving into the arena at a surprisingly rapid pace, and Sirius Satellite Radio just signed up some talent to offer podcasting-based shows. (I might be doing a podcasting show myself fairly soon.)

For listeners, the convenience is the kicker. We can listen at home, at work and in transit. In our homes, thanks to our hard-disk video recorders, live television watching is becoming a rare event. It may not be that long before the same is true for live radio.

Please excuse me now. I'm going to see if I can rig my phone to play podcasts in the car over the Bluetooth connection. **■ 54206**

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## READERS' LETTERS

### Globalization: Do We Help Ourselves by Helping Others?

**L**IKE DON THURMAN, I feel that we should move to help others in the world's "poorest" nations. QuickLink 537693. However, although I am a noncitizen working in the IT field in the U.S., I disagree that it held me the rest of the world before we help ourselves.

The overwhelming reason for outsourcing is to improve the bottom line. It has nothing to do with helping countries with non-U.S. cultures.

We as a country no longer have the resources or the low costs to dominate in areas like manufacturing. We now rely on services. When we lose that edge, what do we have left? No, we should help other countries in the world, but should the IT firm cited by Thurman be out of work because of it? No. Does it worry me personally? No. Does the long-term impact on the U.S. economy? Absolutely.

**Mark Spence**  
Software systems engineer,  
Oak Brook, Ill.

**I** THINK THAT a nation exists first for the purpose of providing safety, freedom and opportunity for its citizens. If the political system doesn't encourage this, then there is little point for its citizens to work hard to improve their lives so their children will be better off.

Clearly, the U.S. has an obligation to encourage global opportunity, but not at the expense of its own citizens. When a country's policies encourage multinational corporations to employ foreigners, it is lowering its citizens' standard of living.

Yes, I feel bad that there are underprivileged people all over the world, but my obligations are to my own family and to my particular my children. If our government felt the same obligations toward its citizens, there would be fewer jobs going overseas.

**Bob LaFollette**  
Vice president of  
product development,  
Mountain View, Calif.

**M**ANY PEOPLE seem to be missing one key point. The global economy exists. It won't go away. While we can do some things to ameliorate its effects on workers in the U.S., we can't build a wall that will keep foreign goods and services out. Any measures with a prayer of effectiveness would be so restrictive we wouldn't want them. Our options are limited. We can lobby and press for an even playing field, and we can find ways to compete.

**Charles J. Wertz**  
Syracuseville, N.Y.  
wvcrjca@aol.net

**I** TOTALLY AGREE with Thurman and just want to add that globalization is all about interdependence of nations and using trade as a means to further economies and relations between countries.

Today, China and Japan will not go to war in spite of their historical, because of trade. And India is trying to make peace with Pakistan —

again trade is the biggest catalyst. Globalization isn't perfect, and neither is democracy, but it's the best means of promoting world order and prosperity without resorting to violence.

**Gavin Kumar**  
Senior systems analyst

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**Tennant, a member in CIO at Network Services Co., a distributed computing in-house consultant, is the author of Building the Next-Generation Enterprise: An Executive Briefing (John Wiley & Sons Inc., 2004). He can be reached at [don@tennant.com](mailto:don@tennant.com).**













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*—Randy McCoy, CTO,  
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## Banking on the ESB

First Command Financial Services Inc. is using Santa Software Corp.'s ESB to support data transformations and routing needed for a customer-facing portal application it plans to roll out this spring.

First World, Texas-based First Command, which provides financial services to active and retired military families, wanted to use Web services to automatically bill customers requests the changing an address. But because customers often have several accounts, including ones for banking, securities and insurance, those services had to link with multiple back-end databases from a variety of vendors, including IBM, Microsoft Corp. and Oracle Corp.

"There weren't many products that allowed you to have open standards and do data transformations seamlessly," says John Quinones, CIO and vice president for IT at First Command. "We needed the ESB to be able to talk to many different databases [and] many different data sources, then take the data, understand business logic of where that data needs to be stored and get it to those locations. It has to not only transport it, it has to translate it into the various formats that are readable by those databases."

In addition, First Command needed technology that would let it apply specific rules. For example, if one member of a family requested an address change, the addresses of other family members would stay the same, Quinones adds.

Using the ESB has helped the company slash its development cycle from eight months to three weeks because developers don't have to customize application programming interfaces to integrate applications.

"It's the plug and play - you make a change to the application, but not the interfaces," Quinones says. "We wanted to be able to build applications that we could put on the network knowing they could talk into the ESB and that we could reuse services across that ESB to provide the needed flexibility and speed of data."

- Heather Havenstein

# Destination: Integration

As enterprise service buses garner more attention, it's time to sort out differing approaches and even what, exactly, the technology does. **By Heather Havenstein**

**T**HE ENTERPRISE SERVICE BUS as a concept has increasingly gained currency in the IT marketplace, even as vendor camps have squabbled over what exactly an ESB is. As a result, many organizations remain uncertain about the need for and role of an ESB in their IT infrastructures. Is an ESB just gussied-up message-oriented middleware, or is it a genuinely new approach to integration?

In response to client inquiries regarding the definition of an ESB, Mike

Gilpin, an analyst at Forrester Research Inc., published a report in August that described the technology as "software infrastructure that enables service-oriented architectures (SOA) by acting as an intermediary layer of middleware through which a set of reusable business services are made widely available."

An ESB typically has some sort of "bus" messaging technology, such as Java Message Service or IBM's MQSeries, and support for Web services standards. The standards

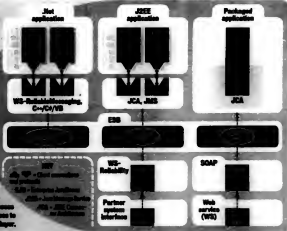
Continued on page 28

## What Is It?

An enterprise service bus acts as a shared messaging layer for connecting applications and other services throughout an enterprise computing infrastructure. It supplements its core asynchronous messaging backbone with intelligent transformation and routing to ensure that messages are passed reliably. Services participate in the ESB using either Web services messaging standards or the Java Message Service. ESBs are increasingly seen by users and analysts as core components in service-oriented IT infrastructures.

## How It Works

The heart of an ESB is an enterprise messaging backbone that can automatically transport data as messages. This messaging core could be proprietary message-oriented middleware, XML technology based on JMS, JMS based on the WS-ReliableMessaging standards, or a generic messaging engine. Each of the applications or services connected by the ESB becomes a service endpoint. The ESB provides a layer of abstraction from underlying protocols and defines a process flow that allows individual services to be invoked across the transport layer.









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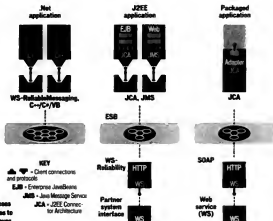
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## FIELD REPORT

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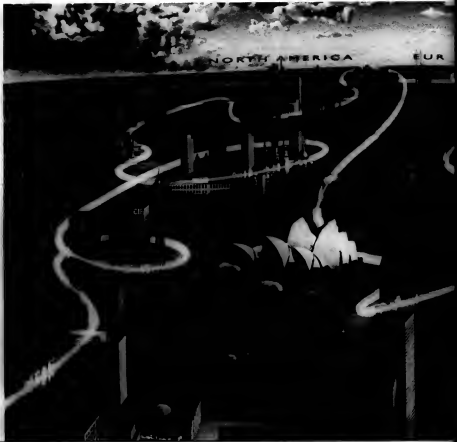
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Continued from page 25

support is designed to let enterprises map data from disparate systems, route messages, ensure that services are delivered — and in the correct order — and enforce security rules automatically by using XML instead of changing code in the interfaces of services.

The ESB has evolved to meet users' demands for a way to integrate applications that's easier than traditional enterprise application integration. EAI systems require coding to link applications and can cost as much as 10 times more.

Enterprises are looking to ESBs to provide the runtime infrastructure for making loosely coupled applications work, says Ron Schmetzer, an analyst at ZapThink LLC in Waltham, Mass.

"If you have a bunch of services doing different things, an ESB can compose them together," he says. "It allows you to run these processes over a long period of time. This has meant being very reliable, meaning that it can guarantee that your message has been received."

The largest group of companies using ESBs are those that need Web services for integration with existing message-oriented Common Object Request Broker Architecture (CORBA) or other integration technologies, Gilpin says.

"Companies want to move toward a service-oriented approach, but they can't throw away the investments they have

made so far," he notes. "The stuff you have is always a logical place to start."

For example, when Raymond James & Associates needed to integrate data from a real-time reporting system operated by the Municipal Securities Rulemaking Board (MSRB) into its trading and reporting system, it opted for an ESB tool from Iona Technologies PLC. The investment brokerage firm has been buying traditional EAI products from Iona for more than 10 years.

Using Iona's Artix ESB, Raymond James can integrate data feeds every 15 minutes detailing municipal bond trades throughout the market from the MSRB's system. The ESB allows the company to integrate feeds from MSRB's IBM WebSphere MQ messaging software into its own CORBA-

based system, says Martin Kullman, vice president and manager of fixed-income technology at St. Petersburg, Fla.-based Raymond James.

"Artix enabled us to have a layer... to be able to input or bring in information from any source," Kullman says.

About 25% of companies using ESBs are replacing existing EAI platforms with the technology, says Gilpin.

"They are saying that EAI was over-sold and it didn't fulfill all their expectations," he says. "If it turns out that 80% of their requirements are satisfied by one of these lighter-weight ESBs, they are using them." **□ \$4956**

### MORE ONLINE

## Lightening the Integration Load

**Shane Craggs**, president of Saint Consulting Ltd. in Hampton, England, and vice chairman of the Integration Consortium, recently spoke to Computerworld about the evolving ESB market.

**Where did the notion of an ESB come from, and why do companies need it?**

The ESB came about because integration is expensive and people were saying, "Is there some sort of lightweight integration package that could do a lot of what we want but doesn't cost as much? Most companies are really at the stage of wanting a bit of integration with a little bit of transformation, a little bit of routing. They don't want the huge, complete functionality that some of the other software stacks provide."

**What are users doing with ESBs?**

There are some customers who are just really getting going with integration and are looking at ESBs as a simple way to get in. Quite a lot are looking at using it to gather with traditional solutions. If you've bought integration for critical operations for the business that are essential and now you are looking at integrating it with people who are doing the merchandising

analysis... their demands aren't the same. It's to hub and spoke with a "train" in the middle. Between every application component, you have to go through the train to see if you need to do any routing or things like that. With a hub, you have more intelligence out in the nodes.

**There seems to be a lot of confusion between Web services and ESBs.**

**Many companies are saying that Web services were billed as a way to do integration without an integration platform, so why do I need an ESB? What is your take on this?** You can use Web services without using an ESB and vice versa. People have assumed you can do your integration just using Web services, and that is a load of rubbish.

Web services tackle some of the connectivity issues and adapter issues. But if you use Web services over HTTP, then you better not be doing anything that requires guaranteed delivery (without an ESB). If you want to transfer money, you have to know the transfer request has got through and only exactly once.

—Heather Havenstein

## Players & Approaches

Vendors offering ESB technology can be broadly separated into three camps: pure-play ESB companies, application server vendors whose products can be customized to meet ESB requirements, and traditional EAI players that are building support for Web services standards on top of their integration platforms.

Forrester Research analyst Mike Dipin describes pure-play ESB products from companies such as Sonic Software, Fumac Software Inc. and Cape Clear Software Inc. as "lightweight ESBs" and generally can be used off the shelf at a fraction of the price of EAI offerings.

Lightweight is not a negative term, says Dipin. "What we really mean is that it is easy to implement and maintain, as opposed to light in not having good capabilities," he says.

Sonic, which has been shipping an ESB prod-

uct since 2002, has a Java messaging infrastructure embedded in its ESB, which markets as an extension to message-oriented middleware to provide services with added business process management.

Gordon Van Houten, chief technology officer at Bedford, Mass.-based Sonic, says an ESB must provide support for transforming the format of applications so they can be used by other services.

"That configuration should be handled through metadata so you create better control over what is happening between the services," he says.

"You can make some very dramatic changes in how systems interact just by changing the configuration metadata."

Although Waltham, Mass.-based Cape Clear doesn't have messaging technology in its ESB, it aims to provide ways to coordinate Web services and SOA interactions on top of existing enterprise messaging infrastructure.

IBM and BEA Systems Inc. don't offer ESB products today, but both are building up their applications server product lines to meet the growing enterprise demand for ESB-like functionality.

Last month, IBM announced the availability of WebSphere MQ Version 5.0, which for the first

time merges the MQ messaging stack with the WebSphere stack, the primary platform for IBM offers for an ESB.

IBM notes that most EAI customers today need a highly customized ESB because they have very high-end and unique requirements.

"IBM can implement an ESB using its technology and services, but it ends up being a specific ESB to the particular customer," he adds.

### In the Game

- Cape Clear
- Fumac
- Iona
- Knewton
- Plex/Life
- Sonic
- Software Ark
- Spheris
- SplicSoft
- Tibco
- WebMethods

BEA is set to ship an ESB code-named QuickSilver in the summer. While its WebLogic application server software is well suited for creating and composing Web services, the ESB will provide dynamic service integration, says Kelly Emie, San Jose-based BEA's director of product marketing.

"The new part of it is the SOA and this idea that you're building the endpoints as shared services and using Web service standards and metadata... to create an easy, simple way to connect and manage your services," she says. "Web QuickSilver using the configuration model, you can add new services... while the other services are connecting and interacting."

Finally, the third camp of vendors marketing products under the ESB umbrella includes traditional EAI vendors like Inga Technologies and Tizon Software Inc., which have built support for Web services standards for specifying integration to B2B, on top of their existing platforms.

These ESB offerings are being suited for EAI users that need to incrementally add integration using services on top of what they already have, according to Dipin.

—Heather Havenstein





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## BRIEFS

Pegasystems  
Unveils BPM Suite

■ Pegasystems Inc. in Cambridge, Mass., last week announced the release of its SmartBuild BPM Suite. The software is a business process management application platform featuring built-in design diagnostics, Pegasystems said. Built upon SmartPM Suite 4.2, SmartBuild provides real-time feedback for software designers. The release also includes ongoing enhancements for J2EE architectures. Pricing wasn't available.

Db4o Database  
Upgrade Debuts

■ Db4objects Inc. in San Mateo, Calif., has announced Version 4.5 of its db4o open-source object database for Java and .Net. The release features true object-oriented replication that enables mobile and embedded devices to more efficiently replicate data between clients or with servers, according to the company. The new version is available for free download at [www.db4o.com](http://www.db4o.com); a subscription-based service is \$1,200 per year.

Microsoft Releases  
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■ Microsoft Corp. has released the second beta version of the update edition of Windows Server 2003 with Service Pack 1, known as R2. It promises improvements in the areas of identity and access management, branch-office server management and storage provisioning, according to Microsoft. The final version of R2 is due in the second half of this year.

Dell Offers New  
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■ Dell Inc. has released the Dell PowerConnect 2700 series of LAN switches, ranging from six to 24 ports and priced from \$130 to \$360. The products have been upgraded to fully managed switches, including Web-based interfaces,

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with Microsoft got their closest picture yet of what the Longhorn version of Windows will look like. As the festivities ended, the speculation began as to whose business might be gored by Longhorn's new features. It's a recurring cycle: Vendors innovate with products that augment Windows and then hold their collective breath, as they wait to see whether Microsoft will extend the next version of its operating system onto their turf.

This time around, the question of who gets trampled turned to Adobe Systems' Portable Document Format (PDF) vendors of desktop search tools, such as XI Technologies; and companies like VMware that provide virtualization software for Windows PCs and servers. In each case, Longhorn offers an overlapping technology that could become a competitive threat.

## Metro vs. PDF

Like the General Motors automobile of the same name, Metro is an economy-class alternative to a more feature-rich product. In this case, the Cadillac is the PDF, Adobe's fixed-document file format. Like Acrobat, the XML-based Metro will allow Windows users to exchange and print files independently of the software and hardware being used. And users won't need a separate reader to view Metro files, as they do with Acrobat. But Acrobat, the XML-based Metro will allow Windows users to exchange and print files independently of the software and hardware being used. And users won't need a separate reader to view Metro files, as they do with Acrobat. But Acrobat, the XML-based Metro will allow Windows users to exchange and print files independently of the software and hardware being used. And users won't need a separate reader to view Metro files, as they do with Acrobat.

Acrobat enables the markup of PDF documents distributed to anyone using its free reader. PDFs can carry metadata



STEVEN A. REINARTZ is  
Computerworld's senior  
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that preserves hyperlinks between captured Web pages or PowerPoint transition effects. Acrobat supports digital signatures, can be used to create intelligent forms and can include metadata that restricts what users can do with a file.

Within an organization, role-based access to documents can be established by way of Adobe's LiveCycle Policy Server. While printer vendors already support PDFs today, they will need to adapt their wares to support raster image processing for Metro files.

Metro is similar to early versions of the PDF. But Acrobat has evolved into something more intelligent and workflow-friendly, and its cross-platform portability should allow Adobe to side-step the bull from Redmond.

## Desktop Search

At a recent meeting, Jim Allchin, group vice president of platforms, made it clear that Microsoft is aiming Longhorn's enhanced search capabilities squarely at desktop search tools such as XI Desktop Search. We'll have to wait for the final release to see how Longhorn performs, but the features it's expected to offer sound compelling. For example, stored views of query results, called virtual folders, and list panes that point to user-defined groups of documents both create ways to visually organize and display data independent of its physical location. And the search capability is more deeply ingrained into the operating system than what an add-on product could hope to offer, allowing, for example, the ability to search the Start menu for a given application.

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## Virtualization

Longhorn will bring virtualization to Windows in a way that Virtual Server 2005 can't: It integrates a "hypervisor" virtualization software layer that sits below the operating system and communicates directly with the system hardware, as VMware ESX Server does. That's more efficient than Virtual Server, which hosts virtual machines (VMs) on top of a full version of Windows.

There is now no question as to who will own the virtualization layer in Windows environments. And it makes sense for Microsoft to integrate the Windows operating system tightly to now, virtualization-aware processor architectures. VMware is likely to maintain its edge in heterogeneous computing environments. No matter what hypervisor product is used to create VMs, enterprises are likely to demand mature tools such as VMware's VirtualCenter to manage across all of them.

VMware and other vendors have plenty of time to prepare for Longhorn. The desktop version won't ship for at least 18 months, and the server version won't arrive until 2007. No matter who wins the race, however, IT will be the big winner. And the best vendors will innovate around Longhorn rather than be impaled upon it. **EW5297**

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ROBERT L. MITCHELL

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This may be the year outsourcing "incurs less of a dirty word," says JERRY BARTLETT, vice president of application development and quality assurance at Ameritrade. "IT leaders are recognizing they need to move beyond the rhetoric."

**100**  
PREMIER  
[SPOTLIGHT]  
Praised as a panacea then pilloried as anti-American, outsourcing is finally settling in as just another tool in the CIO's toolbox.  
By Mary Brandel

## Word Reconsidered

**S** EVEN HUNDRED NINETY-ONE. That's the number of companies that, according to CNN commentator Lou Dobbs' Web page, are either "sending American jobs overseas or choosing to employ cheap overseas labor."

Since 2003, Dobbs has kept a running tally of companies that, in his view, are "exporting America." In that same time frame, it has become increasingly difficult to find a CIO who doesn't clam up at the mention of outsourcing or offshoring for fear of becoming yet another name on that list.

Today, with the presidential election a distant

memory and the press frenzy subsiding, the subject has cooled off a degree or two. While outsourcing is still controversial, we've reached the point where most IT executives — whether they believe it's a good thing, a necessary evil or an act of treason — agree on this: It's time to take a realistic look at outsourcing.

CIOs say it's only by talking openly about outsourcing and offshoring plans that they can help allay uncertainty about the topic. Moreover, they reason that it's far better to concentrate on what they can control, not on what they fear. And what they can control is the value they provide.



"This may be the year it becomes less of a dirty word," says Jerry Bartlett, the Columbia, Md.-based vice president of application development and quality assurance at Ameritrate Holding Corp. "Cooler heads are beginning to prevail, and IT leaders are recognizing they need to move beyond the rhetoric and step up to their leadership roles."

"The shock has passed, and people are beginning to say, 'This is reality,'" agrees Michael Corbett, president of Michael F. Corbett & Associates Ltd., an outsourcing consulting firm in Lagrangeville, N.Y.

"They've realized that companies are going to make certain decisions along these lines, and they're starting to think about how to position themselves."

Moreover, managers have had enough experience with offshoring to understand that it's not likely to send their companies over the rainbow. "The idea that they're going to save 70% to 80% in development costs is a myth," says John Wade, CIO at Saint Luke's Health System in Kansas City, Mo. "You have to help guide [offshore providers] through the process, and with the additional overhead, savings are more like 20% to 30%."

### Just Another Option

Whatever view you take of outsourcing, it's pretty clear that the entire spectrum of sourcing—outsourcing, in-sourcing, offshoring, near-shoring and rural sourcing—has gained a place as a bona fide tool in the CIO's tool belt. "Outsourcing was previously viewed as an end, but now it's viewed as one of various means to an end, with the end being more efficient development, lower costs or higher quality," Bartlett says.

Many CIOs see it as their responsibility—and even an economic necessity—to at least consider some type of sourcing. "Every service company today has to have an offshoring component," Wade says. "You can't afford to say, 'We'll use only U.S. labor,' and that's creating a problem for our country."

Saint Luke's doesn't use offshore outsourcing today, but every three years Wade conducts a formal review to see whether outsourcing would reduce his IT costs. "You have a responsibility as CIO to provide the most cost-effective service you can," he says. "If you aren't, you have to look at your options."

The right question for CIOs, then, is not, "Should we outsource?" but, "Are we the best at what we do?"

In fact, the exercise of analyzing outsourcing opportunities can turn into a positive for IT. Mark Gottfredson, a partner at Bain & Co., a management consulting firm in Boston, recalls being asked to examine whether an IT department should be outsourced.

The review process revealed ways to make the department more competitive, and that saved it from an outsourced fate. "If you go back 10 years, IT was a function that everyone had to have, but you didn't know if it was competitive or not," Gottfredson says. "Today... the question is, 'What is our cost per line of code versus the best in the world?'"

But your IT department can't adopt that philosophy if it's cringing in fear of the next memo. "If you're open and honest and candid, that can be a motivator," says John Dick, CIO at Regions Financial Corp. in Birmingham, Ala. Lately, the company has been mulling the idea of moving to a market-driven pricing model for its IT services. "As we do that, we have to strike the right balance between quality and the service we offer," Dick says. "If we can't, there are other

## Puzzle Pieces

Looking at the statistics that have been cited and dished on both sides of the offshoring-outsourcing argument, it's easy to understand why the subject has caused such a stir. Here are just a few of the recent numbers:

**400,000**

Number of service jobs sent overseas since 2000.

Source: The Goldman Sachs Group Inc.

**104,000**

Number of IT jobs lost due to offshore outsourcing between 2000 and 2003, equalling 2.8% of U.S. IT jobs.

Source: Information Technology Association of America

**3.5 million**

Number of U.S. white-collar jobs sent overseas by 2015, averaging 200,000 a year.

Source: Forrester Research Inc.

**3%**

Percentage of last year's total layoffs due to offshoring.

Source: U.S. Department of Labor

**10%**

Average rise in U.S. IT wages during the past year.

Source: Bain & Co.

**68%**

Rise in total value of IT outsourcing contracts from Q1 2004 to Q1 2005.

Source: ITI Index

**\$10.8 billion**

The value of IT outsourcing contracts signed in the first quarter of 2005.

Source: ITI Index

options for the business. It's a driver for us to measure and demonstrate our value to the business." Corbett advises organizations to begin educating their workforces about the realities of the business and its competitive needs. "People have a right to understand what the business's future prospects look like, how the market is changing and what it will take for the company to be successful," he says.

Bartlett says it's important to define the particular reason you're outsourcing and to honestly communicate that with your staff. For instance, outsourcing at Ameritrate is primarily viewed as a way not to cut costs but to increase speed of service delivery.

Since Ameritrate emphasizes innovation, Bartlett's staff understands that if a function is outsourced, it's because it's considered nondifferentiating. "Even with our development staff, we have discussions around initiatives that may or may not be good candidates for sending out, because they understand the context within which we're operating," he says.

For David Rice, CIO at Siemens Medical Solutions Inc. in Malvern, Pa., keeping his IT staffers competitive means constantly reminding them to "skill up."

"We have to think and act like we're competing for our business; it's not our entitlement," he says. "The guys who work with me get tired of hearing me say it, but we've always got to skill up to stay on top of whatever discipline is needed."

Rice empathizes with those who find it difficult to constantly upgrade skills. But if they choose not to, "they really shouldn't be later lamenting that someone else who had better skills got the opportunity to do the business," he says.

For people who want to play the skill-up game, Corbett advises moving from "contest" to "contest" jobs. "If your job is reacting to e-mails requesting change to pieces of code, that's content work that can be done anywhere by skilled people," he points out. Contest-oriented jobs are those in which you need to understand how technology connects to the user. "People need to adjust their careers to reality," he says.

### Warts and All

More people are seeing outsourcing for what it is, warts and all. "It's really not that different from any other deal," Rice says. "Yeah, labor costs are remarkably less expensive, but what about the network costs to effectively communicate with that site? We've learned through the school of hard knocks to look under the hood."

EqualTerra Inc., a sourcing advisory firm in New York, says managing offshoring is a complex task about 8% of the contract's value per year. And Bain estimates that businesses need to retain 7% to 12% of their original head count to manage outsourcing relationships. "People are becoming more realistic about the costs and better skilled at assessing the risks," says Stephen Johnson, an outsourcing partner at Kirkland & Ellis LLP, an international law firm in Chicago.

But even as CIOs become more willing to talk about outsourcing, it still remains a difficult topic because of the lives it touches. "You can have all the right business explanations and intellectual underpinnings for why offshoring makes sense, but if you're the guy who isn't going to have a job tomorrow, that doesn't feel so good," Rice says.

"The people who scare me the most are the ones who talk as if they've got it all figured out," he adds. "I've found [outsourcing] very difficult, but in our global economy, to not do it is a mistake." ■ 54064

Brandel is a Computerworld contributing writer in Grand Rapids, Mich. Contact her at [mary.brandel@comcast.net](mailto:mary.brandel@comcast.net).

### OFFSHORING MISSTEPS

A Conference Board report discusses the things that go wrong in offshoring initiatives and how to fix them:

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■ June 9-10, New York  
 Sponsor: **Forrester Research Inc.**  
 Finance Forum 2005 focuses on building customer relationships in financial services companies. Topics include the CIO as an agent of change, online fraud, rethinking customer security, enterprise content management, online design to promote cross selling, and creating better Web and e-mail experiences. [www.forrester.com/Finance2005](http://www.forrester.com/Finance2005)

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BARBARA GOMOLSKI

## IT and Business: Stayin' Aligned

I JUST RETURNED from a conference for CIOs, where one of the main topics was the elusive quest for IT-business alignment. It is not, of course, a new challenge. Good CIOs have long been chasing business leaders, trying to forge better working relationships.

The goal of IT-businesses alignment is to help the organization reach its goals by improving the outcome of IT initiatives. A poorly aligned IT organization is one that's unable to respond to the needs of the business (which change all the time, by the way).

Therefore, well-intentioned IT leaders are forced to try to divine the business strategy — which is often missing or poorly articulated — and do what it takes to get in step. Given the dynamic nature of business, this is difficult at best.

I don't mean to be negative about IT-business alignment. It's a worthy goal. In fact, it's really the only way to approach your job, unless you're content with the role of keeper of infrastructure.

But to see why it's so difficult to achieve, let's look at alignment as it pertains to ERP applications. During the height of ERP implementation, IT organizations and business units sat shoulder to shoulder to build systems that would be well matched to their companies' business processes.

Even if those ERP teams succeeded (and the likelihood was probably equal to that of winning a coin toss), today those companies are lamenting that their ERP systems have become too rigid and inflexible. The result? IT (the organization) appears to be out of alignment in a big way because of IT (the technology).



ERP is probably one of the most dramatic and challenging examples of the problem with the quest for alignment between the business and the IT organization. It illustrates the main point CIOs have to recognize: Alignment is a moving target, not a permanent condition. Moreover, the likelihood of achieving it is slim at best unless the CIO understands certain things. Here are

a few of them:

- **Infrastructure, while essential, adds little value to the business and isn't a big opportunity for IT-business alignment.** It's certainly important to have an efficient and reliable infrastructure that supports business initiatives. But when many IT leaders spend 80% of their time on these activities, there's no energy left to pursue real alignment.

- **Functionality that doesn't differentiate your organization shouldn't be developed.** A key part of IT-business alignment is for the business to be able to use IT to achieve its goals. The business can't do that if IT is off rewriting a general

ledger or building a better call center system. Don't overdevelop applications. If it's merely a routine process, such as payroll or order management, use off-the-shelf systems, and get it done as quickly and cheaply as possible.

One conference attendee I talked to developed an application spec that included more than 2,000 function points. It was going to cost over a million dollars and take more than a year to develop. The person's company took a hard look at the actual functionality of the system and realized that only a small part was unique and differentiating. With that understanding, it was able to reduce the scope of the project to about 400 function points.

Consequently, the company cut the price tag to about \$400,000 and reduced development time to four months. That left more time and resources for activities that were more aligned with the business goals.

- **One key to alignment is technological flexibility.** Implement the most flexible and adaptable technology possible so that your technology can change with your business.

- **Alignment can be achieved only when the business leaders recognize and accept their role.** So many organizations complain that the business units don't accept ownership for IT or that they abdicate responsibility for IT assets to the CIO. Business leaders wouldn't acquire a piece of physical real estate and then walk away from it. They must understand that it's not OK to walk away from IT.

- **Alignment is mostly about trust, credibility and respect.** Only IT leaders who inspire those kinds of feelings in the business leaders ever achieve alignment — and keep it. ☐ 54067

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BARBARA GOMOLSKI

## IT and Business: Stayin' Aligned

I JUST RETURNED from a conference for CIOs, where one of the main topics was the elusive quest for IT-business alignment. It is not, of course, a new challenge. Good CIOs have long been chasing business leaders, trying to forge better working relationships.

The goal of IT-businesses alignment is to help the organization reach its goals by improving the outcome of IT initiatives. A poorly aligned IT organization is one that's unable to respond to the needs of the business (which change all the time; by the way).

Therefore, well-intentioned IT leaders are forced to try to divine the business strategy — which is often missing or poorly articulated — and do what it takes to get in step. Given the dynamic nature of business, this is difficult at best.

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■ **Infrastructure, while essential, adds little value to the business and isn't a big opportunity for IT-business alignment.** It's certainly important to have an efficient and reliable infrastructure that supports business initiatives. But when many IT leaders spend 80% of their budgets and almost 100% of their time on these activities, there's no energy left to pursue real alignment.

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# KNOWLEDGE CENTER MOBILE & WIRELESS

05.16.05

## WIRELESS LEADER:

### Health Care

William Brook, director of IT at Children's Memorial Hospital of Chicago, is using wireless technology to help eliminate medication errors. Page 40

## WIRELESS LAGGARD:

### Financial Services

The industry lags, but early users are attracting new customers and tackling security issues. Page 48

## Vertical Horizon

Opinion: The PC found its way into corporate IT by satisfying horizontal market needs. Wireless handholds will succeed because they solve vertical industry problems, says columnist Mark Hall. Page 53



# Leaders & Laggards

Some industries are racing ahead with wireless applications.

**I QUIETLY CHUCKLE** to myself when someone talks about "the wireless enterprise" as though there's some monolithic definition of what that is. The fact is that wireless applications vary dramatically, depending on whether your organization has workers in hard hats atop utility poles, or nurses gliding between hospital rooms to alert neighbors, or slick traveling salesmen cutting deals in airport lounges.

That's why, in this special report, we've examined how wireless technologies are being applied in five very different vertical industries: health care, government, utilities, manufacturing and financial services. The leaders and laggards among these industries might surprise you. According to the Mobile Plans Index developed by Forrester Research, the financial services industry - usually a voracious user of emerging technologies - is among the slowest to adopt mobile IT, while the usually conservative government and

health care sectors are well ahead.

To make it an even more complicated matrix, Forrester analyst Carl Zito says we have to consider the different needs of three types of mobile applications that may be used within the same industry or company: those for field workers, those for roaming information workers, and sensors for asset or inventory management. At the moment, these applications are all spreading up us on all five levels as "isolated islands of mobile functionality" within the enterprise, Zito says.

He warns that pretty soon we'll need to figure out how to centrally manage this hodgepodge of wireless applications in order to control costs, avoid incompatible technologies, provide consistent tech support and limit security risks. © 53000

Mitch Beitz is executive editor of *Computerworld*. Contact him at [mitch.beitz@computerworld.com](mailto:mitch.beitz@computerworld.com).







# KNOWLEDGE CENTER MOBILE & WIRELESS

05.16.05



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## WIRELESS LAGGARD Financial Services

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## Vertical Horizon

The IT found its way into corporate IT's satisfying horizontal market. Wireless handhelds will succeed because they solve vertical industry problems. Says columnist Mark Hall:



## EDITOR'S NOTE

I QUIETLY CHUCKLE to myself when someone talks about "the wireless enterprise" as though there's some monolithic definition of what that is. The fact is that wireless applications vary dramatically, depending on whether your organization has workers at hard hats atop utility poles, or nurses gleaming between hospital rooms in silent sneakers, or slick traveling salesmen cutting deals in airport lounges.

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For wireless news and advice, visit our Mobile/Wireless Knowledge Center online.

Mitch Betts is executive editor of Computerworld. Contact him at [mitcb@computerworld.com](mailto:mitcb@computerworld.com).

# Leaders & Laggards

SPECIAL  
REPORT

Some industries are racing ahead with wireless applications.



**T**HE HEALTH CARE INDUSTRY — traditionally known as a laggard in the IT arena — is now emerging as a leader in adopting mobile and wireless technology.

In an October 2004 study of wireless adoption in various vertical industries, market research firm IDC found that more than 80% of 34 health care organizations polled said they have deployed wireless LANs or plan to deploy one in the next 12 months. And according to the 2005 Health-care Information and Management Systems Society Leadership Survey, which was published in February, 79% of 253 health care executives responding to an online questionnaire said they will use wireless information systems this year while 54% said they will use handheld devices.

"Doctors were the first large worker base that started using PDAs on the job," says Ellen Daley, a principal analyst at Forrester Research Inc. "Here are a bunch of people who have an appetite for carrying PDAs, and here is a cheap way for wirelessly enabling a hospital. Hospitals decided to put the two together to see how they can improve patient care."

This marriage of clinicians armed with mobile devices and hospitals moving to deploy WLANs as a cheaper and more effective way to provide connectivity in aging buildings is resulting in the growth of health-care-specific wireless applications.

In the IDC study, more than 60% of the respondents in the health care industry reported using industry-specific wireless applications. That dwarfs the percentage of respondents in other industries, such as banking and manufacturing, who reported using tailored wireless applications.

Within health care, some of the most popular uses of wireless technology include accessing and updating electronic medical records (EMR) at patients' bedside, matching bar-coded patient wristbands and medication packages to physician orders, and using wireless badges for voice communication.

#### **Reducing Medication Errors**

Pairing mobile devices with doctors and nurses who are almost always on the move could reduce errors by allowing data to be accessed and entered into systems at the point of care, according to industry observers.

However, wireless technology often brings new challenges. Among other things, health care organizations must secure patient data, guarantee the usability of devices and find a way to deploy wireless access points without disrupting care.

Children's Memorial Hospital of Chicago has tapped wireless technology as part of its efforts to

*Continued on page 42*

# Health Care

Doctors and PDAs proved a good match, helping give the industry an early lead with wireless. **By Heather Havenstein**





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eliminate medication errors. In December, the hospital completed the rollout of a broadband distribution system from InnerWireless Inc. that acts as a utility to support WLANs, personal communications services, cell phones, handhelds and two-way radios.

Nurses now scan bar codes on patient wristbands and on medications with a scanner attached to their chest. The device system is car-linked by a small network to an application that contains physician medication orders, says William Brook, the hospital's director of IT.

"This way, the nurse knows she has the right drug for the right kid at the right time of day," Brook says. "It's a quality assurance issue for us."

Although Brook says nurses are already reporting use of a utility in medication administration, the system has prevented some problems. During the pilot of the bar coding project, the hospital used laptops on rolling carts but found that they were vulnerable to viruses and unauthorized access by medical students, Brook says. So the hospital turned to remote access technology from Citrix Systems Inc. to deliver applications on thin clients.

In addition to the challenges around the use of laptops, Brook found installing the wireless access points to be more difficult in the hospital than it would be in an office building. Workers often had to install the access points at night when there was less access to and use sterile curtains to ensure that no dust or other material would get into patient rooms, he explains.

However, the wireless infrastructure has also allowed the hospital to eliminate dead spots in its paging system, and it will be used as the hospital deploys an EMR system to support the use of handheld devices to enter data, Brook notes.

### Keeping Patient Data Secure

Sutter Health in Sacramento has installed WLANs in about 75% of the 27 hospitals it operates in Northern California. Like Children's Memorial Hospital, Sutter is focused on putting bar coding technology with thin clients at the bedside to reduce medication errors.

In addition, Sutter has included wireless access to handheld devices in its plans to begin rolling out an integrated EMR system to all its hospitals by the end of 2006, says John Hummel, Sutter's CIO.

By using Citrix remote access technology with

thin clients, Sutter can control what type of information doctors can access and download to mobile devices, and thus meet patient data security and privacy guidelines, Hummel says.

"In most cases, the only thing [doctors] are downloading is just a view of a screen," he says. "We limit what they can download so it is not patient information or sensitive data. As soon as they log off, that information evaporates. Nothing is stored locally."

But going wireless has given some doctors the expectation that they can use a hospital's WLAN like a public Wi-Fi hot spot found in a coffee shop or an airport, Hummel adds.

"We have a secured Wi-Fi site, so you can't just walk in and drop in on one of our nodes," he says. Hospital officials are now looking for a way to ease the frustration of users who want to use their own wireless cards in their laptops and other devices instead of being required to use cards provided by the hospital, according to Hummel.



Although these leading users are moving ahead with wireless, barriers still prevent many others in the industry from following, according to analysts. Wireless-enabled handhelds usually work well for online prescriptions or other simple-purpose applications, says John Quinn, principal at Capgemini Health,

who serves as chief technology officer for the IT services firm's provider practice. But for the clinical documentation generally needed for EMR systems, handhelds have "too little real estate for the amount of information to be managed," he says.

Interest in using tablet PCs for wireless access to clinical systems is increasing, but designing the architecture so the wireless application can handle the data influx without suffering performance problems and ensure that no patient data is stored on devices has proved difficult for many vendors, he adds. "You wind up with some very, very big databases that have to be local to the device, and that becomes a challenge for the architect," Quinn says. "What am I loading onto it, and how do I keep it synchronized yet keep performance up so people will use it?"

In addition, even the slightest performance degradation with a wireless device is likely to prompt physicians to balk at using the wireless application, he says.

"The primary reasons why these projects fail is lack of physician buy-in," Quinn says. "It could be because they find some mistakes in how the system is set up ... and lose faith in it and feel like they are better off sticking with paper and pen."

Still, despite the challenges, wireless is taking hold in the health care market.

For example, Sutter's Hummel says that as his organization moves forward, he and his

rebuild all existing hospital buildings to meet earthquake construction codes. "We have not been able to figure out how to justify wired other than for specialized [medical] equipment." ■ S3663

## Wearable Tech

Mercy Medical Center in Cedar Rapids, Iowa, is one of a growing number of hospitals that relies on wireless communication devices to more closely link its doctors and nurses. Mercy uses voice-activated "badges" from Vocera Communications Inc. that are 3 inches long and weigh about 2 ounces. Nurses wear the badges around their necks and use them to page doctors, call the pharmacy and respond to patients who press the call buttons in their rooms.

With the badges, nurses can make and receive calls from anywhere in the hospital; they're no longer tied to the phones in the nurses' stations, according to Jeff Cash, Mercy's vice president and CIO. The hospital purchased 300 Vocera badges to replace SpectraLink Corp. phones that worked well but were too cumbersome for nurses to carry, says Cash.

Adopting the badges required Mercy to ensure that there was wireless signal coverage throughout the hospital. With Cisco's WLAN Softline Engine, Mercy can measure the output of all access points; if one fails, the tool can automatically boost the signal strength on an adjacent access point.

—Heather Haverstein



With the wireless badges, Mercy's mobile link keeps in touch from anywhere in the hospital.

**MOST POPULAR APPLICATIONS:** Accessing and adding electronic medical records at patients' bedside, tracking information from lab, x-ray or patient vital signs, and mobile packages to physicians' orders, and using wireless devices for voice communication.

**SOME LEADING ADOPTERS:** Sutter Health, Children's Memorial Hospital of Chicago, The Cleveland Clinic, Benignus & Berens Medical Center in Boston.

**TOP CHALLENGES:** Ensuring that systems comply with the security guidelines of the Health Insurance Portability and Accountability Act, getting physicians to use the wireless applications, and designing architectures to handle large data loads.

### PAPER CUTS

Medical education remains, for the most part, on paper. But e-learning and e-pay, says columnist Frank Hayes.

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### PAPER CUTS

Medical information remains, for the most part, on paper. That's expensive and risky, note columnist Frank Hayes:

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**P**UBLIC-SECTOR uses of wireless technology run the gamut, from top-secret espionage and defense applications to mundane office-worker applications designed to replace paper forms and improve productivity.

Judging by the number of deployments and the unusual nature of the applications, analysts say the public sector stands out as a leader in its use of wireless.

In fact, a September survey by Forrester Research Inc. of nearly 900 large organizations, including various levels of government, determined that the public sector is the leading adopter of mobile IT when compared with large private-sector companies. In a separate survey, IDC also ranked the public sector as a top adopter of wireless and mobile technologies.

IDC reports that the most popular use of wireless in government is e-mail on laptops and handhelds, including BlackBerry devices. Eliminating the government's paper overload might be the most common reason for using wireless technology, but new projects have a variety of goals, such as enabling couriers to make deliveries more quickly. Wireless seems poised for continued growth in government, assuming that concerns about finding qualified developers and making applications secure can be overcome.

Government applications are clearly different from private-sector applications because the public sector uses so much more paper than other user groups, so devices such as handhelds and laptops that are connected wirelessly can provide a real benefit, notes Carl Zetie, an analyst at Forrester.

At the Pennsylvania State Senate in Harrisburg, drafts of bills and legal documents are now wirelessly transmitted to legislators via e-mail. Deborah Maguire, director of computer services for the Democratic caucus, recently deployed a new version of Novell Inc.'s GroupWise software to 20 wirelessly equipped BlackBerry 7520s from Research In Motion Ltd. "It's amazing that you never have to go back to the office ever," says Maguire, who also uses the technology. Wireless access to full bill texts is next, she says.

### Security Challenge

The public sector also deals with critical military, intelligence and public-safety applications. "That makes government very different from anybody else, because the systems need to be completely reliable, secure, rugged and simple to operate under extreme circumstances," Zetie says.

For example, security was a huge concern at the



**MOST POPULAR APPLICATIONS:** Reducing paper and providing highly reliable and secure wireless systems for defense, intelligence and public-safety personnel.

**SOME LEADING ADOPTERS:** Hill Air Force Base, the U.S. Joint Forces Command, the Pennsylvania Senate

**TOP CHALLENGES:** Finding personnel to deploy complex wireless systems and keep them running, finding ways for public-safety wireless systems to interoperate.

U.S. Joint Forces Command in Suffolk, Va. Its wireless deployment provides nearly 400 users with secure Wi-Fi access from laptops and tablet computers over systems built entirely from commercially available products, says Tony Cerri, a civilian who serves as director of engineering.

Derek Krein, a security and wireless engineer at Professional Software Engineering Inc. in Virginia Beach, serves as lead contractor on the command's project. He says all wireless network users are isolated from the wired networks because they use a separate 2GHz/sec backbone. Walls were erected with metal wallpaper to prevent wireless eavesdropping, and a combination of Layer 2 encryption and wireless gateway passwords keeps the system secure, Krein says.

"I'm much more comfortable on the wireless network than the wired one," says Cerri. The system has been so effective for almost a year that Cerri says he would like to see wireless LANs deployed in more commands and even near combat areas.

"A lot of people in [the Department of Defense] think wireless is still insecure, but I can't imagine DOD preferring wired networks four years from now," he says. "Why set up a wired field-command post when you can set up a wireless one in half the time? We think it's here today."

Some of the standard products used at the com-

mand are a round-the-clock wireless monitoring system from AirDefense Inc. in Alpharetta, Ga., and the AirWave Management Platform from AirWave Wireless Inc. in San Mateo, Calif., providing automated deployment and management of more than 78 access points. Krein says.

### Delivery Drivers

Bob Egan, an analyst at Mobile Competency in North Providence, R.I., says the military is ahead of private industry with uses of wireless technology for asset and inventory management.

At Hill Air Force Base in Utah, for example, an in-house application for tracking aircraft parts and other materiel has been recently extended to both Wi-Fi and wireless cellular networks. That makes it easier for trucks to speed up deliveries to dozens of hangars says where F-36 and A-40 aircraft are maintained, says Matt Martin, a civilian technical lead for Hill's IT modernization branch.

Drivers carry wireless handheld devices, such as the Audiovox 6601, equipped with bar code scanners. An inventory list received on the device tells drivers the pallet of parts to scan in, Martin says. A Wi-Fi network serves the driver's device in many locations, but because the base is so large, drivers often wander off the WLAN. In that case, they receive information over a Sprint Corp. cellular network. The devices are equipped to handle both networks, and roaming is relatively seamless, with only a millisecond of delay when crossing a network boundary, says Jerrod Pullum, a program manager at London-based Icon Consulting who also works on the project.

The delivery system supports dual wireless network mode capability, similar to what United Parcel Service Inc. and other delivery companies offer over their own proprietary systems. However, Hill's system works with commercially available gear, Martin says. IBM's WebSphere software makes the connections possible.

"This gives information into a driver's hand so they can make more decisions in a day and not have to wait," Pullum says. Martin says Hill Air Force Base's project has served as a pilot for a system that is expected to be adopted at Robins Air Force Base in Georgia and Tinker Air Force Base in Oklahoma. Radio frequency identification might be deployed in a year at Hill, he says.

Despite the advances, challenges remain. They include providing setup and maintenance of complex systems and finding trained personnel to do the work, Egan says. "Mobile solutions are still very complicated," he notes.

Another thorny issue for public safety and homeland security is how to get emergency personnel to use more interoperable wireless devices and networks, adds Zetie. During a major catastrophe, emergency personnel from different jurisdictions may use radios that don't talk to one another, he says. Firefighters and police officers might have saved more people on Sept. 11, 2001, he says, had more of them been trained to use new equipment capable of inter-operating between some networks. "A clear weakness is independent jurisdictions not working together, which is hard to fix in the U.S. and something deeply entrenched in the culture," Zetie says. "The answer will come through collaboration." © 53987

# Government

Wireless technology aids a wide range of public-sector employees, from spies to office workers. **By Matt Hamblen**



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# Financial Services

The industry lags, but early users attract new customers and tackle security issues. **By Lucas Mearian**

**Y**OU'D BE HARD-PRESSED to find a floor trader on Wall Street who isn't packing a BlackBerry or some other handheld wireless device. But on the whole, the financial services industry has trailed other industries in wireless adoption.

In a 2004 survey of nearly 900 North American companies by Forrester Research Inc., only 39% of the financial services firms polled said they had adopted mobile business applications. In comparison, the average adoption rate across all industries was 47%.

As one financial services executive notes, the big concern is still security. The sensitive nature of financial transactions, combined with the lack of protection offered by today's standard encryption methods, continues to hold back use of wireless networks and devices by financial services companies, says Larry Tabb, founder of The Tabb Group in Westboro, Mass.

Research firm IDC does not expect widespread adoption of wireless in the banking industry anytime soon. "We don't see a pressing need for having wireless LANs within the bank. Physical IP networks are just fine," says Sophie Louvel, an analyst at IDC's Financial Insights unit in Framingham, Mass.

But the possibility of attracting high-value customers with wireless trading applications, as well as the introduction of more-robust encryption standards, have begun to soften resistance in the financial services industry, says Tabb.

An October 2004 IDC survey showed that Research In Motion Ltd.'s devices have found a niche in the industry. Forty percent of financial services respondents said they are using

or plan to use such devices, four times the overall usage rate in the North American market. The New York Stock Exchange, for example, implemented last December that it had purchased 3,000 Java-based wireless handheld devices from IBM for its floor traders (QuickLink S596).

## Reaping Early Rewards

Fidelity Investments is one of the few financial services companies that embraced wireless technology early on. In 1998, Fidelity began offering retail brokerage trades via Wi-Fi. Today, the Boston-based firm's wireless offering, Fidelity Anywhere, has more than 350,000 subscribers to applications that span 14 business units, including 40(k) services, insurance, portfolio advisory services and even its transportation business, Boston Coach. The services are available from any wireless device, including cell phones.

"One thing we're very pleased with is that wireless services do attract a very good customer," says Joe Ferra, chief wireless officer at Fidelity. "Fidelity was very wise in the early stages to offer content to even noncustomers. That's set us up very nicely for these customers who get stock quotes and news feeds. Now when they want to do a transaction, we're top of mind."

Ferra sees wireless in financial services as an evolutionary process in which customers first become comfortable viewing account balances on wireless devices and then move on to performing transactions. Fidelity's current effort is around personalizing the services given to each customer.

But Ferra points out a major issue for financial services companies that are

deploying Wi-Fi: Tailoring graphical images and information to fit on the typical 1-by-1 in. or 1-by-2 in. screens of handheld devices is difficult.

Tabb agrees. "Let's face it, there are not a whole lot of Web sites developed for those small screens," he says. "Getting to a Web site that is one or two clicks on a PC may take 15 clicks on a handheld."

## Less Paper, More Speed

Tabb says progress is being made in another sector of the financial services industry: insurance. Leading adopters of Wi-Fi technology, insurance companies have used the technology mainly to allow workers in the field to access forms and customer information online in order to process claims more quickly. The returns on investment include less paper, less time spent manually processing claims and better customer retention.

While in the field, adjusters and claims representatives can instantly document a loss or accident and input the data into a handheld or a wireless link. In some cases, adjusters can cut claims checks on-site, Tabb says. "Those are workers who need instant access to information," he says.

Gene Fredriksen, vice president of information security at Raymond James Financial Inc. in St. Petersburg, Fla., sees wireless technology as a way for executives, brokers and operations personnel to have instant access to clients, news and market updates. The financial services firm hopes to improve customer service, increase productivity and streamline its corporate operations by deploying wireless networks at each of its 2,300 locations around the world.

Raymond James is currently deploying wireless networks in 120 primary

offices in the U.S. Launched 18 months ago, the Wi-Fi project is expected to take another 24 months to complete and cost upwards of \$1 million, Fredriksen says.

A major concern for Fredriksen throughout the project has been network bleed-over — or data spilling outside of the network area.

"You need to properly engineer a network so you get good coverage without broadcasting the fact that you have wireless access to every neighbor within half a mile," he says. "I don't want to underestimate the amount of appropriate engineering, both for access points and for the facility."

The focus on encryption and authentication has gone hand in hand with the risk of network bleed-over. Fredriksen says he looked at standard encryption methods, but "every time a wireless vendor came up with security, it was rapidly cracked." He's now using military-grade AES encryption.

Still lacking is local caching of access credentials, "so should the connection to the primary authentication server be lost, those remote users could continue to have access," Fredriksen says.

Despite the success early adopters have had with Wi-Fi offerings, security is still a constant concern. Fidelity is currently layering elliptic curve cryptography technology on top of standard network encryption algorithms, such as Secure Sockets Layer.

"We are thinking of doing other things to beef up security — second-level authentication, where users get little tokens and type that in within a specified period of time to gain access," Ferra said. "We treat security as paramount." **CS680**


**MOST POPULAR APPLICATIONS:** Accessing insurance client information and forms, monitoring news and stock feeds, and accessing e-mail and instant messaging systems.

**SOME LEADING ADOPTERS:** Fidelity Investments, Mesirow Securities Inc., Chicago Mercantile Exchange Inc., Chicago Board Options Exchange, The Hartford Financial Services Group Inc., Allstate Corp.

**TOP CHALLENGES:** The need for security that addresses network bleed-over and includes means of encrypting data and authenticating users. Financial services companies tend to buy multiple encryption and authentication technologies on top of one another, adding complexity.







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**MOST POPULAR APPLICATIONS:** Automated meter reading, mobile workforce management, remote plant controls monitoring.

**SOME LEADING ADOPTERS:** Public Service Electric and Gas Co., Kansas City Power & Light Co., Xcel Energy, Southern Maryland Electric Cooperative, Southern Co.

**TOP CHALLENGES:** Getting work crews to accept and use wireless systems. Some utilities haven't been able to cost-justify investments in automated meter-reading systems.

# Utilities

Wireless offers productivity gains but encounters worker resistance. **By Thomas Hoffman**

**P**OWER COMPANIES are rarely front of mind when you think about industries on the leading edge of technology adoption. But utilities are at the forefront of using wireless systems for a wide range of activities, from averaging mobile workforces to reading meters and monitoring plant control systems.

An October 2004 IDC study of wireless adoption in various vertical industries revealed that 33% of utility companies had only recently begun implementing mobile or wireless technologies. But the report also noted that the percentage of companies in the utilities sector reporting plans to implement wireless in the next 12 months

was greater than the percentages of companies in other industries with similar plans.

The IDC study also reported that the most popular wireless applications for the utilities industry are personal information management applications, remote field-service applications, and inventory and distribution management systems.

"If you did an inventory of all the wireless applications that a typical utility is using, there could be a list of 20 or 30 technologies," including wireless spread spectrum and wireless radios, says Rick Nicholson, vice president of Energy Insights, a market research division of IDC.

But despite the productivity improvements and other advantages that wireless applications have delivered to the U.S. power industry, the systems have also created a new set of challenges. Among other things, "you're asking field workers who typically aren't real IT-savvy to adopt new technologies and to change the way they do their jobs," says Nicholson.

## Stormy Weather

Sometimes those changes are well received. For example, before Public Service Electric and Gas Co. (PSE&G) equipped just under 2,000 of its field trucks with wireless devices, the Newark, N.J.-based utility had been using radios to dispatch work orders to its crews.

During a storm with multiple power outages, getting work orders out via radio was time-consuming. "It was very tough to dispatch a large volume of work orders over a large network," says Paul Caffery, manager of asset information and system policy at PSE&G.

PSE&G began rolling out ruggedized CF-38 wireless devices from Panasonic Corporation of North America to its work crews in 2002, and now it's able to dispatch thousands of work orders in a matter of minutes, says Caffery. And while it's tough to measure the direct impact that the use of wireless systems has had on the utility's ability to respond to outages, the company has pared the average duration of power outages from 89:67 minutes in 2000 to 66:81 minutes in 2004, says Karen Johanson, a spokeswoman for the utility.

Some utilities have held off on deploying wireless meter-reading systems because of the uncertain reception that the systems would get from their unionized work crews.

For its part, PSE&G is piloting a few different wireless meter-reading systems but has held off on adopting a

single system because it isn't yet sold on the cost benefits, says Gregg Peterson, general manager of solutions delivery at PSE&G. "We have upwards of 2 million customers, and upwards of 2 million anything is a big outlay," adds Caffery.

## Meter Success

Other organizations, including the Southern Maryland Electric Cooperative (SMECO), have estimated that an investment in radio-based automated meter readers (AMR) could be cost-effective.

"We did a study on this with a consultant and determined that the optimal mix would be to provide AMR to about 50% of our customer base," especially in more densely populated areas, says Joe Trentacosta, vice president and CIO at SMECO.

Currently, the Hughesville, Md.-based utility reads about 27,000 meters using wireless devices from Itron Inc. in Spokane, Wash., says Trentacosta. It plans to deploy another 32,000 devices over the next two years, he adds.

Trentacosta says SMECO is also considering systems that would allow its engineers to map out an electrical infrastructure for a city street or an apartment complex using wireless devices and then upload that data to a computer-aided design system back at headquarters.

At Minneapolis-based Xcel Energy Inc., warehouse managers have been using wireless devices from Symbol Technologies Inc. in Holtsville, N.Y., to track gloves, chemicals and other goods and materials it uses at two of its plants, according to Bryan Frieauf, a business technology executive at Xcel in Denver.

Xcel created customized screens for the Symbol devices so that the systems could be integrated with a maintenance application called Maximo from Cambridge, Mass.-based MRO Software Inc., says Frieauf.

Xcel is also testing another wireless application using the Symbol devices that allows instrument control technicians at its power plants to do remote calibration tests on all plant equipment, says Frieauf.

So far, says Frieauf, the inventory management system has delivered the strongest return on investment of all of its wireless initiatives.

"We don't have to spend the dollars to have inventory managers or contractors track plant equipment manually," says Frieauf, who adds that the wireless inventory system should pay for itself within two years. **© 2005**





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**MOST POPULAR APPLICATIONS:** Wireless warehouse management and inventory tracking.

**SOME LEADING ADOPTERS:** The Boeing Co., Ford Motor Co.

**TOP CHALLENGES:** Complexity of integrating wireless with back-end applications, ensuring service reliability in tough environmental conditions on plant floors and in distribution centers.

**T**HE NEED TO IMPROVE materials handling, inventory management and asset management processes is driving use of wireless technologies in the manufacturing sector. But cost and complexity are keeping the pace of adoption slow, experts say.

"Companies are recognizing that this is a viable technology, and what they are trying to do is look at it a little more strategically and understand how it can work in different parts of their business," says Dennis Gaughan, an analyst at AMR Research Inc. in Boston.

An October study of 933 U.S. and Canadian companies by IDC showed that about 53% of process manufacturers and 39% of discrete manufacturing companies have already implemented some wireless and mobile technologies. This included technologies such as laptop computers, Pocket PC's and Palm OS-based handheld devices, smart phones and specialized industry-specific tools.

Those numbers put the manufacturing industry somewhere in the middle of the pack when it comes to wireless adoption, behind the transportation and insurance industries but ahead of the professional services and retail sectors.

As with their counterparts in other industries, manufacturing companies are increasingly using wireless technologies to improve communications and enable better access to information for corporate sales force automation and customer relationship

management applications. But the real value has come from wireless use in warehouse and distribution environments and, to a lesser extent, on the shop floor, according to analysts.

### Into the Warehouse

Wireless-enabled radio frequency data-capture devices such as wands, scanners and imagers are used fairly widely for identifying, tracking and monitoring almost everything that moves within a manufacturing environment, says Rob Douglas, president of Pixon Teklogix Inc., a Mississauga, Ontario-based vendor of such devices.

The ability to track materials is enabling more-efficient inventory management, enterprise asset management and maintenance, as well as order fulfillment and field-support operations, Douglas says.

Analysts say they expect radio frequency identification tags to add further tracking capabilities. One of the most popular applications of wireless technologies involves the use of RF devices for material handling in distribution warehouses.

"We use wireless for bar code scanning equipment, moving inventory around, cycle counting, building shipping documents as we load the truck from pick lists, receiving operations, shop floor alerts for more parts and look-up of items," says Dennis Roell, IT manager at Betts USA Inc., a Florence, Ky.-based manufacturer of injection-molded components.

The benefits of such automation can be enormous, says Brad Barnett, chief operating officer at TaylorMade Golf Co. in Carlsbad, Calif.

TaylorMade, a wholly owned subsidiary of Adidas-Salomon AG, saw a 24% improvement in labor productivity in its main warehouse as a result of its decision to deploy a wireless-enabled warehouse management system. The application is based on software from Provia Software Inc. in Grand Rapids, Mich., and wireless devices from Pixon PLC in London, the parent company of Pixon Teklogix.

"It provides us an accuracy benefit in that we are able to know exactly where every container is in the warehouse at any given time," Barnett says. "And it provides us with a productivity benefit in terms of the materials put-away operations."

"When you consider warehouse applications, manufacturing companies are unquestionably the leaders in wireless use," says Ken Dulaney, an analyst at Gartner Inc.

Environmental conditions and the presence of heavy equipment make the plant floor a less-than-

ideal environment for broad wireless use, says Harry Forbes, an analyst at ARC Advisory Group Inc. in Dedham, Mass.

But the difficulty of setting up a wired network on the plant floor is making wireless an attractive option for capturing data about production-line metrics, quality control and applications for tasks such as job scheduling and asset monitoring, Gaughan says.

Automotive and aerospace companies, such as Ford Motor Co. and The Boeing Co., respectively, are big users of wireless in the manufacturing sector, as are vendors of high-tech equipment, Dulaney says.

### Industry-focused Software

One of the big trends surrounding wireless use in the manufacturing sector is the move away from proprietary RF devices and wireless LAN infrastructures to more standards-based ones, Gaughan says. Devices running on narrow-band 900-MHz network frequencies, a staple among manufacturers, are being replaced by Windows CE-based handhelds running on 802.11x and Wi-Fi networks.

The standardization of technologies is likely to result in more packaged wireless application software aimed at manufacturers, AMR's Gaughan says. It will also reduce the cost and the complexity that have traditionally been linked with deployment and maintenance of wireless applications, but not entirely.

The task of integrating WLANs to back-end processes such as inventory reporting and supply chain management is still hard to do, analysts say. Technology issues include wireless signal dissipation and security. Another problem is the relative lack of knowledge about wireless technologies among many small-supplier, Roell says.

"For many of our suppliers, I have had to educate them, create their bar-code labels and guide them on what hardware and software will help them accommodate our bar-code needs," he says.

Cost is a big factor as well, says Roell. "When you are dealing with high production volumes of items and profits measured in fractions of a penny per part, you get real picky how you spend," he says.

In many cases, companies tend to look for other ways to cut costs — such as cheaper sources of raw materials — rather than invest in wireless, he says.

As a result, there is a pressing need to have a clear understanding of goals, says Gaughan. "Wireless is expensive and complicated," he says. "Where we found the most success was at companies with a real good business case." ■ **50066**

# Manufacturing

This middle-of-the-pack industry outfitted its salespeople first, but bigger benefits might be in the warehouse. **By Jaikumar Vijayan**



## SNAPSHOTS

### Selection Criteria

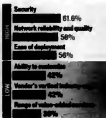
Enterprise users say these are the most important selection criteria for mobile/wireless technology vendors:

1. Network reliability and quality
2. Security
3. Competitive pricing
4. Compatibility with existing IT
5. Ease of deployment

Base: 376 IT decision-makers at North American companies; multiple responses allowed

### Customer Satisfaction

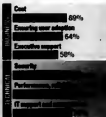
Users rated their satisfaction with the following mobile/wireless technology and vendor characteristics:



Base: 451 IT decision-makers at North American companies; multiple responses allowed

### Top Challenges

The biggest management and technical challenges in mobile/wireless projects:



Base: 327 decision-makers at North American companies; multiple responses allowed

SOURCE: IDC, PHARMACIA MARKS, OCTOBER 2006

MARK HALL

# Vertical Horizon

**O**VERWORKED CIOs SHOULD REFUSE TO SUPPORT end users' wireless devices unless the handhelds are for a specific business requirement. And saving hotshot executives a few minutes of their precious time so they can thumb their way through e-mail while waiting in airport security lines isn't a business requirement.

But don't start practicing polite but firm ways to say no just yet. That's because the wireless industry will be unleashing in the coming months and years a slew of vertically focused products designed to deliver true business value and not just gee-whiz convenience.

As a result, handheld wireless devices have the potential to shake the foundation of IT much like PCs did so long ago. Just as the PC disrupted corporate IT by appealing to broad numbers of workers with horizontal software like Excel and Word, wireless systems will similarly discombobulate your department by luring end users with claims that they can solve business-specific application needs.

This means you overworked CIOs are doomed to deal with wireless device proliferation. "No" won't be in your vocabulary. And you'll be hearing from your line-of-business peers about the ROI of the wireless applications they want. Real soon, I suspect, if you haven't already.

According to The Insight Research Corp. in Bonton, N.J., eight vertical markets — utilities, health care, transportation, communications, wholesale trade, retail trade, durable manufacturing and financial services — are poised to spend \$7.6 billion in 2006 on wireless data services alone. That figure doesn't include the billions of dollars spent on the hardware and software designed for those markets. Nor does it include the billions more you'll spend in your collective budgets to secure and support these myriad devices.

If the handhelds on your horizon merely meant more expense, you wouldn't have to worry. But they're much worse.

You'll be confronting the deployment and management of complex, n-tier applications running on a mix of largely unexplored operating systems. Compounding the problem is the endless array of hardware configurations and suppliers that you'll get to choose from. Plus, you'll have to think very carefully about the added information-security burdens. You'll need to attract new people with wireless skills or train existing staff on new stuff. And you'll have to cull through an untested crop of consultants to find the gems who know your business and wireless technology.

This will be much, much more than just ordering instant messaging for your sales force from your cell phone service provider. It's a daunting process, one

that might send many a current CIO into early retirement. But hold on.

"Don't panic," soothes Michael Mace, chief competitive officer at PalmSource in Sunnyvale, Calif. "You don't need a big wireless strategy now."

He says wireless technology is moving at such a fast pace that it would be unwise to cast your wireless policy in stone today. "Let it evolve," he says.

Mace, whose company develops the Palm operating system for many different wireless handheld makers, thinks you should "pick the low-hanging fruit" inside your company. That means driving wireless deployment programs that do what everybody knows IT does best: automate processes and eliminate paper. Field service staffers, claims Mace, are among your

best candidates for wireless tools. Look to buy or develop wireless applications that improve the productivity of expensive workers in the field, reduce their data-entry errors and cut process costs, Mace says. It's an easy way to become a hero inside the company.

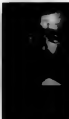
Brian DeMay agrees. Field services is an ideal place for wireless applications. But "winning user adoption is huge," adds the manager of business development for new markets at Mobile Data Solutions in Richmond, British Columbia. Think through how those end users work. Will they be

using devices inside their vehicles or in all kinds of weather? Do they need a ruggedized unit? The hardware's form factor may be just as important as the software it runs, DeMay warns. In most cases, the field service staff won't be nimble-thumbed teenagers. Make sure the data-entry process is dead simple.

One more bit of advice from DeMay: If you support union workers in the field, don't try to bypass them. Get the union on board and involved in the device-selection process.

Training will be key, too, agree DeMay and Mace. Whether you support callous-handed journeymen working atop telephone poles in ice storms or soft-handed heart surgeons, it's likely that whenever wireless handheld device and application you give them will be a brand-new experience.

You won't be the only person suffering through the upheaval wireless technology brings. End users will need a lot of hand-holding for their handhelds. Be kind. **© 2006**









MARK HALL

# Vertical Horizon

## Selection Criteria

Enterprise users say these are the most important selection criteria for mobile/wireless technology vendors.

- 1 Network reliability and quality
- 2 Network coverage
- 3 Competitive pricing
- 4 Compatibility with existing IT
- 5 Security
- 6 Ease of deployment

Base: 518 IT decision-makers at North American companies. Multiple responses allowed.

## Customer Satisfaction

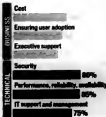
Users rated their satisfaction with the following mobile/wireless technology and vendor characteristics:



Base: 518 IT decision-makers at North American companies. Multiple responses allowed.

## Top Challenges

The biggest management and technical challenges in mobile/wireless projects:



Base: 518 IT decision-makers at North American companies. Multiple responses allowed.

SOURCE: IDC // FARMINGTON, N.H. // FEBRUARY 2006

**O**VERWORKED CIOs SHOULD REFUSE TO SUPPORT end users' wireless devices unless the handhelds are for a specific business requirement. And saving hotshot executives a few minutes of their precious time so they can thumb their way through e-mail while waiting in airport security lines isn't a business requirement.

But don't start practicing polite but firm ways to say no just yet. That's because the wireless industry will be unleashing in the coming months and years a slew of vertically focused products designed to deliver true business value and not just gee-whiz convenience.

As a result, handheld wireless devices have the potential to shake the foundation of IT much like PCs did so long ago, just as the PC disrupted corporate IT by appealing to broad numbers of workers with horizontal software like Excel and Word, wireless systems will similarly discombobulate your department by luring end users with claims that they can solve business-specific application needs.

This means you overworked CIOs are doomed to deal with wireless device proliferation. "No" won't be in your vocabulary. And you'll be hearing from your line-of-business peers about the ROI of the wireless applications they want. Real soon, I suspect, if you haven't already.

According to The Insight Research Corp. in Beaverton, N.J., eight vertical markets — utilities, health care, transportation, communications, wholesale trade, retail trade, durable manufacturing and financial services — are poised to spend \$2.6 billion in 2006 on wireless data services alone. That figure doesn't include the billions of dollars spent on the hardware and software designed for those markets. Nor does it include the billions more you'll spend in your collective budgets to secure and support these myriad devices.

If the handhelds on your horizon merely mean more expense, you wouldn't have to worry. But they're much worse.

You'll be confronting the deployment and management of complex, n-tier applications running on a mix of largely unexplored operating systems. Compounding the problem is the endless array of hardware configurations and suppliers that you'll get to choose from. Plus, you'll have to think very carefully about the added information-security burdens. You'll need to attract new people with wireless skills or train existing staff on new stuff. And you'll have to call through an untested crop of consultants to find the gems who know your business and wireless technology.

This will be much, much more than just ordering instant messaging for your sales force from your cell phone service provider. It's a daunting process, one

that might send many a current CIO into early retirement. But hold on.

"Don't panic," soothes Michael Mace, chief competitive officer at PalmSource in Sunnyvale, Calif. "You don't need a big wireless strategy now."

He says wireless technology is moving at such a fast pace that it would be *unwise* to cast your wireless policy in stone today. "Let it evolve," he says.

Mace, whose company develops the Palm operating system for many different wireless handheld makers, thinks you should "pick the low-hanging fruit" inside your company. That means driving wireless deployment programs that do what everybody knows IT does best: automate processes and eliminate paper.

Field service staffers, claims Mace, are among your

best candidates for wireless tools. Look to buy or develop wireless applications that improve the productivity of expensive workers in the field, reduce their data-entry errors and cut process costs, Mace says. It's an easy way to become a hero inside the company.

Brian DeMuy agrees. Field services is an ideal place for wireless applications. But "winning user adoption is huge," adds the manager of business development for new markets at Mobile Data Solutions in Richmond, British Columbia. Think through how those end users work. Will they be

using devices inside their vehicles or in all kinds of weather? Do they need a ruggedized unit? The hardware's form factor may be just as important as the software it runs, DeMuy warns. In most cases, the field service staff won't be nimble-thumbbed teenagers. Make sure the data-entry process is dead simple.

One more bit of advice from DeMuy: If you support union workers in the field, don't try to bypass them. Get the union on board and involved in the device-selection process.

Training will be key, too, agree DeMuy and Mace. Whether you support callous-handed journeymen working atop telephone poles in ice storms or soft-handed heart surgeons, it's likely that whatever wireless handheld device and application you give them will be a brand-new experience.

You won't be the only person suffering through the upheaval wireless technology brings. End users will need a lot of hand-holding for their handhelds. Be kind. **CS 53896**





## IT Careers in Biotechnology

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## Computerworld's CareerMall E-mail Newsletters



The collage consists of four small, square black-and-white photographs arranged in a 2x2 grid. The top-left photo shows a person's face in profile, looking towards the right. The top-right photo shows a group of people standing outdoors, possibly at a public gathering or protest. The bottom-left photo shows a close-up of hands holding a small object, possibly a candle or a piece of fabric. The bottom-right photo shows a person sitting at a desk, working on a computer or typewriter.

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FRANK HAVES • FRANKLY SPEAKING

# No End in Sight

**T**HE LAST TIME WE HEARD from Nicholas Carr, in 2003, he was pitching the idea that IT doesn't matter [Quick-Link 38477]. Now he's back with an article in the spring MIT Sloan Management Review called "The End of Corporate Computing." Carr seems to have learned something in two years: You don't get high-dollar consulting gigs by telling potential clients that their products and job functions don't matter. So now he's taking a 100-year view, saying the end of corporate computing could take a lonnng time. He's also getting behind vendor pitches for grid, on-demand and utility computing.

Trouble is, he still doesn't understand much about IT.

In "End," Carr compares IT to electrical generation 100 years ago. He lovingly details how individual companies once generated 60% of all electricity in the U.S. and how that changed when Sam Insull created Chicago's Commonwealth Edison, the first big electric utility. Insull used economies of scale to drive down costs, worked out metering and pricing, then rolled out sophisticated marketing to convince manufacturers to shut down their generators and buy juice from him.

IT, Carr says, can be outsourced in much the same way. Corporate IT is scattered and wasteful, with miserably low capacity utilization. Centralizing IT is an irresistible trend, and supercentralizing it in outside utilities is inevitable. We're just waiting for a new Sam Insull to create the vision and define the utility computing industry.

Well...no. High-capacity utilization is important when a production resource is expensive. Thanks to Moore's Law, computing gets so much cheaper so fast that economies of scale are trivial. That's why spreadsheets run on PCs, not mainframes.

And centralization isn't so much a trend as a cycle. Users decide central IT's prices are too high, so they buy their own servers or Web sites or network gear. Then the cost of managing decentralized IT gets too high, so it's re-centralized into the data center. Then the cycle starts again. Takes about 10 years to go around. Watch, and you'll see it.

And utility computing has its own Sam Insull — Ross Perot, who realized in 1992 that he could sell computing instead of computers and left

IBM to found EDS. (The idea wasn't even new then: ADP had been a payroll data-processing utility for five years.) Utility computing is mature. And it works. But it hasn't replaced corporate computing the way Commonwealth Edison replaced private generators.

Why not? Because corporate computing is no longer about big data-processing generators. Hasn't been for years. IT shops still process data, but the real action comes from business people who use computers to communicate, to monitor current business processes and to simulate new business scenarios.

Users are the ones who experiment and create business innovation. So the most important place to put computing, and control of that computing, is in users' hands. Everything else — networks, data, back-end applications — is there to support those users. They do corporate computing. We in IT just help.

And if we replace their flexible, too-cheap-to-meter computing with thin clients and a fixed-cost, fixed-services utility, as Carr recommends? IT gains manageability, centralization and higher utilization. Business users lose the ability to innovate.

Yeah, that would sure align IT with business needs, wouldn't it?

Will Carr ever understand corporate computing? Probably not. He's got a vested interest in his Industrial Age utility model and the end of IT — his best shot at the big time.

But corporate IT's interests had better remain with the users — whose scattered, wasteful computing is the best generator of business advantage we've got. **Q 54346**



**FRANK HAVES**, Computerworld's senior news columnist, has covered IT for more than 20 years. Contact him at [frank\\_haves@computerworld.com](mailto:frank_haves@computerworld.com).

## Thinking Like a User

Web hosting company is targeting its primary Internet link, so nationwide pilot fish notifies customers that everything will be off-line for two hours. Fourth client calls: "I need you to put a 'temporarily unavailable' page up for us, as you have done in the past." That was during minor upgrades, fish explains patiently. This time is different — with the Internet disconnected, users won't be able to get to our servers at all. "Each-ly!" says frantic client. "That's why we need the 'temporarily unavailable' page even over!"

**Shark!**

Help shark pilot fish get a call from an unhelpful user: "We have a power outage tonight. It has a massive impact on us and has big black things." Pilot fish is a power outage or a Web? "I don't know. It's plugged in." Is the computer on or turned off? "The computer is off." And you have to turn what the big black thing is on? "No. Do you want me to put the phone closer so you can hear it tonight?" Pilot fish, I'd need someone over to check it out.

**Shark!**

Power outage. User: "Oh, shut up!"

**Shark!**

User can't get Web working from his hotel room, apparently because of his company's standard proxy settings. He asks shark pilot fish to update using a bypass route. "I asked him to launch the bypass route," fish reports. "He said, 'Where is it?' in which I replied, 'On your desktop.' He argued that it wasn't there. After several minutes, I finally asked user what he did on his desktop. He responded, 'It looks like the hard disk is full, and a corrupted file and my laptop.'"

**Shark!**

What?

Website pilot fish claims that e-mail server was down for 10 hours, as anyone who was receiving a message should request a record. User: "How do you request a record on the computer?" Pilot fish: "You'd need to send an e-mail to the person you expected the message from, and ask them to send any related e-mails to you again. User: "How do I know who sent me a message?"

**SHARK! YIKES!** Not to worry now. Send your true tale of IT life at [shark@computerworld.com](mailto:shark@computerworld.com). You'll receive a sharp Shark alert if we it. And check out the daily feed, between the Shallows and sign up for Shark Tank home delivery at [computerworld.com/shark](http://computerworld.com/shark).







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